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ANNUAL REPORT

. . . OF THE . . .

INSPECTOR OF BUILDINGS

. . . TO THE . . .

MAYOR AND CITY COUNCIL OF BALTIMORE,

. . . FOR THE . . .

FISCAL YEAR ENDING DECEMBER 31, 1905.

BALTIMORE.
WM. J. C. DULANY CO.
PUBLIC PRINTERS.

1905.

Department of Buildings

PERSONNEL

EDWARD D. PRESTON,	Inspector of Buildings
H. C. SHELLEY,	Asst. Inspector of Buildings
R. H. CORNTHWAITE,	District Inspector
JOS. R. DEGENHARDT,	District Inspector
GEO. A. HOUCK,	District Inspector
WM. H. SCHULZ,	District Inspector
JAS. J. BYRNE,	District Inspector
IGNATIUS BURNS,	District Inspector
ARTHUR L. BROWN,	District Inspector
JOHN S. BUSICK,	Inspector City Property
EDW. WHITING,	Asst. Inspector City Property
JAS. W. MCCUEN,	Furnace Inspector
WILLIAM CLARKE,	Electric Inspector
CLARENCE RANSOM,	Electric Inspector
L. L. KINGSBURY,	Electric Inspector
ALBERT W. COOPER,	Chief Clerk
ELMER ALTREITH,	Assistant Clerk
HENRY ALLNUTT,	Permit Clerk
J. F. O'MAILEY,	Electric Clerk
CLIFFORD SPEDDEN,	Draughtsman

REPORT

Department of Public Safety—Improvements
Sub-Department Office Inspector of Buildings,
City Hall,

Baltimore, January 2, 1905.

To the Honorable
the Mayor and City Council of Baltimore City.

Gentlemen:

I herewith submit summary and tables of work done under the supervision of this office for the year ending December 31, 1904.

Respectfully submitted,

Ed. D. Preston,
Inspector of Buildings.

SANITARY AND OTHER IMPROVEMENTS.

Original appropriation $10,480 00

EXPENDITURES.

Polytechnic Institute—New rooms	$388 00
No 3 School—New entrances to teachers' rooms	224 00
No. 5 School—New entrance	95 00
No. 28 School—Outside vestibule	169 75
No. 39 School—Outside stairway	485 00
No. 55 School—3 new vestibules; partition in hot-air room	754 90
No. 58 School—Partitions and cloak-room	370 00
No. 68 School—New front entrance; stairway; hall floor; fences	445 97
No. 73 School—New outside stairway; 1 new floor	310 00
No. 84 School—New vestibule; new entrances boys' and girls' toilets	488 00
No. 96 School—New vestibule	117 70
No. 107 School—Flush complete two new floors	643 21
No. 116 School—New toilets	462 63

There were improvements made in the sanitary work at the following buildings:

No. 1 School	339 43
No. 3 School	156 00
No. 13 School	267 90
No. 15 School	237 81
No. 25 School	87 60
No. 26 School	54 00
No. 43 School	109 60
No. 47 School	37 53
No. 54 School	35 39
No. 55 School	997 51
No. 56 School	14 48
No. 58 School	1,539 19
No. 64 School	49 00

No 71 School	25 00	
No. 79 School	444 80	
No. 82 School	75 00	
No. 95 School	82 00	
No. 100 School	210 00	
No. 106 School	181 15	
No. 107 School	414 00	
No. 116 School	168 45	
		$10,480 00

Considerable painting has been done to the school buildings. It is the aim of this office to keep these buildings protected with paint, and in order that this may be properly done without too much outlay at one time, the inside of a school is done one year and the outside another year.

The total amount for painting at the schools was $16,293.38.

General repairs to floors, stairs, locks, fencing, paving, roofing, etc., were made to Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 31, 32, 33, 34, 35, 37, 38, 39, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 55, 57, 58, 59, 60, 61, 62, 63, 65, 66, 67, 68, 70, 71, 72, 73, 75, 76, 77, 78, 79, 80, 81, 82, 90, 91, 92, 93, 94, 95, 96, 97, 99, 100, 101, 102, 103, 105, 106, 107, 108, 109, 110, 111, 113, 114, 115, 116, 118 at a cost of $86,496,12.

The painting and general repairs were done out of the appropriation for repairs to city property consolidated; the separate amounts expensed on each school building will be found in the annexed table.

There are some city buildings now being used that are unfit for school purposes, and should be replaced with new ones, or improvements made in them to better their condition; and but few of the rented buildings would be used if the School Board could do better.

FIRE DEPARTMENT HOUSES.

During the year the following houses have been repaired:

Engine House No.	1	Engine House No.	13
"	2	"	14
"	3	"	15
"	4	"	16
"	5	"	17
"	5	"	18
"	6	"	19
"	8	"	20
"	9	"	21
"	10	"	22
"	11	"	23
"	12		
H. & L. Co. No.	1	Chemical Co. No.	1
"	2		
"	4		
"	5		
"	6		
"	7		
"	8		
"	10		
"	11	Temporary Engine, Forest Park.	

At a cost of..... $34,354 99

MARKETS.

Each of the eleven markets have had some repairs and painting. Their general structural condition is only fair, but all need painting, and a majority of the roofs need considerable repairing. Amount spent on markets in total were $6,077.16.

STATEMENTS

STATEMENT OF APPROPRIATIONS AND DISBURSEMENTS ABOUT THE OLD CITY PROPERTY.

Repairs to city property, consolidating..	$152,808	58	
Sanitary and other improvements to school houses	10,480	00	
Completion of schools, engine and truck houses	26,078	00	
Emptying cesspools	300	00	
Livery and transportation	900	00	
Incidentals	400	00	
Cutting wires	290	12	
	$191,256	70	

Paid out for City Hall and Annex	$12,091	37
Paid out for Courthouse	15,247	11
Paid out for City Jail	3,356	53
Improvement School Board and buildings	4,954	16
Sanitary work	5,525	84
Painting school buildings	16,293	38
Repairs floors, roof, paving, plumbing, etc	62,465	95
Rebuild No. 1 Engine House	7,642	27
Repairs to engine and truck houses	26,712	72
Repairs to markets	6,077	16
Repairs to other property	3,222	00
Paid livery and transportation	900	00
Paid incidentals	400	00
Paid cutting wires	290	12
Completing Schools Nos. 74, 69, 83, 84, 55 and 100 and Engine House No. 25..	26,078	09
	$191,256	70

SALARY ACCOUNT FOR 1904.

Appropriation	$28,020 84	Inspector of Buildings	$3,000 00
		Assistant Inspector of Buildings	1,382 95
		13 Assistant Inspectors	11,558 25
		1 Furnace Inspector	1,250 00
		3 Electric Inspectors	5,205 60
		4 Permit Clerks	3,271 65
		1 Clerk	1,250 00
		1 Draftsman	937 50
		Extra help	135 00
		Balance	29 89
	$28,020 84		$28,020 84

NEW IMPROVEMENTS, AS PROVIDED FOR IN ORDINANCE OF ESTIMATES, 1904.

	Appropriation.	Paid Out 1904.	Balance.
Lot and building, No. 5 Truck....	$25,000 00	$4,576 01	$20,423 99
Lot and building, No. 12 Truck...	17,000 00	.....	17,000 00
Eastern High School.....	100,000 00	31,679 37	68,320 63
Lot and building, school, Forrest Park.....	15,000 00	.....	15,000 00
Building, addition to No. 96 School.....	60,000 00	14 05	59,985 95
Lot and building, school, Lakewood avenue and Oliver street..	70,000 00	4,440 05	65,559 95
Completing No. 74 School.....	2,212 61	2,212 61	.....
Completing No. 62 School.....	1,368 36	1,368 36	.....
Completing No. 83 School.....	2,925 75	2,925 75	.....
Completing No 84 School.....	1,440 00	1,440 00	.....
Completing No. 55 School.....	1,387 44	1,387 44	.....
Completing Saratoga and Mount Streets School	12,664 13	12,664 13	.....
Completing No. 25 Engine	3,469 80	3,469 80	.....
Completing No. 7 Truck.....	610 00	610 00	.....
Partition City Engineer's Dept..	8,000 00	8,000 00	.....
Case for Health Department.....	400 00	396 00	4 00
	$321,478 09	$76,183 57	$246,294 52

STATEMENT

SHOWING APPLICATIONS AND PERMITS, AND VALUES OF IMPROVEMENTS.

In the year 1904 applications were made for 20,908 buildings and improvements. Of which there were:

15	churches, valuation named	$ 237,900 00		
5	banks	298,000 00		
3	hotels and apartment houses	149,500 00		
8	office buildings	2,373,000 00		
559	stores, warehouses and manufactories	8,077,368 00		
997	dwellings	1,261,220 00		
518	additional improvements	438,089 50		
9	hospitals	129,500 00		
2	theatres	91,000 00		
1	school	2,300 00		
		$13,057,877 50		
Add	20 per cent. for reason previously given	2,611,575 40		
			$15,669,452	90
317	porches	$ 47,550 00		
210	frame extensions	52,500 00		
104	frame bath rooms	41,600 00		
684	sheds	376,200 00		
693	minor (franchise) privileges	313,056 40		
95	clothes dryers	4,800 00		
4	rear awnings	120 00		
7453	repairs (general)	1,490,600 00		
7237	electrical permits of all kinds (value of work)	497,213 00		
50	steam engine permits	50,000 00		
99	steam boiler permits	125,000 00		
83	gas engines	24,900 00		
8	gasoline engines	4,000 00		
263	electric motors	2,630 00		
242	low pressure heating (steam)	242,000 00		
98	hot water heating	68,600 00		
1151	hot air furnaces	287,750 00		
218	permits for new elevators	194,700 00		
27	permits for repairs to old elevators	8,100 00		
			$3,831,319	44
	Amount carried forward		$19,500,472	34

Amount brought forward				$19,500,472 34

In addition to the above work has been done or commenced by the city as follows, in 1904:

	Appropriation.	Paid Out 1903.	Paid Out 1904.	
Lot and building, No. 10 School	$45,000 00	$4,130 95	$1,580 00	
Lot and building, Eastern High School	100,000 00		31,679 37	
Lot and building school, Forrest Park.	15,000 00			
Building addition to No. 96 School.	60,000 00		14 05	
Lot and building, Lakewood ave. and Oliver street	70,000 00		4,440 05	
Building No. 22 Engine House	15,000 00		1,000 00	
Lot and building, No. 24 Engine House	20,000 00	4,515 47	14,484 53	
Lot and building, No. 25 Engine House	30,000 00	26,220 03	3,779 97	
Lot and building, No. 5 Truck	25,000 00		4,576 01	
Lot and building, No. 12 Truck	17,000 00			
Saratoga and Mount Streets School	50,000 00	45,221 35	4,778 65	
Building barracks at Quarantine	7,195 50	5,050 57	2,144 93	68,478 02
				$19,568,951 36

Also the rebuildiug and repairing of engine houses and repairs to schools, City Hall, Courthouse and other city buildings	$102,808 58
Improvements and sanitary work in schools	10,480 00
Completion of schools, engine and truck houses	26,078 09
Total work in connection with this office.	$19,708,318 03

AMOUNT APPROPRIATED FOR 1905.

Repairs to city property, consolidated	$201,092 57
Sanitary improvements	44,800 00
Emptying cesspools	200 00
Completion of No. 5 Truck House	10,000 00
Addition to City Jail	14,000 00
Eastern High School	100,000 00
	$370,092 57

APPLICATIONS AND PERMITS—COMPARATIVE STATEMENT FOR THREE YEARS.

	1904.		1903.		1902.	
	No.	Value.	No.	Value.	No.	Value.
Churches	8	$237,900 00	8	$87,800 00	17	$560,522 40
Banks	8	298,000 00	2	15,000 00	6	332,400 00
Hotel and apartment houses	3	149,500 00	8	1,978,500 00	7	1,926,000 00
Office buildings	8	2,373,000 00				
Stores, warehouses, etc	559	8,077,368 00	164	1,557,403 00	50	848,922 00
Dwellings	997	1,261,220 00	1,004	1,418,180 00	1,491	2,519,246 40
Additional improvements	518	438,089 50	431	205,948 00	510	325,606 80
Hospitals	9	129,500 00				
Theatres	2	91,000 00				
School	1	2,300 00				
Sheds	684	376,200 00	744	89,280 00	731	73,110 00
Frame extensions and porches	527	100,050 00	635	117,475 00	913	168,700 00
Bath rooms	104	41,600 00	82	104,006 00	70	17,500 00
Rear awnings	4	120 00	10	425 00	5	200 00
Franchise privileges	693	313,056 40	411	5,734 24	583	13,381 00
Clothes dryers	95	4,800 00				
Repairs to walls, sheds, etc	7,453	1,490,600 00	4,726	945,200 00	5,026	1,004,800 00
Electric wiring	7,237	497,213 00	4,574	114,350 00	1,387	17,400 00
Hot water apparatus	98	68,600 00	70	49,900 00	66	33,000 00
Hot air furnaces	1,151	287,750 00	1,195	478,000 00	1,228	184,200 00
Steam heating apparatus	242	242,000 00	104	124,800 00	77	77,000 00
Steam power boilers	99	125,000 00	63	189,000 00	96	192,000 00
Gas power engines	83	24,900 00	54	54,000 00	55	27,500 00
Steam engine	50	50,000 00				
Gasoline power engines	8	4,000 00	6	3,300 00	5	2,500 00
Electric motors	263	2,630 00	193	74,306 00	57	17,100 00
New elevator permits	218	194,700 00				
Permits to repair old elevators	27	8,100 00				
	21,149	$16,889,196 90	14,484	$8,512,601 24	12,380	$8,341,088 60

STATEMENT

SHOWING CONDEMNATION AND NOTICES SENT FOR THE PUBLIC SAFETY.

	1904	1903	1902
Hotels	2	.....	3
Churches	.....	1	5
Schools	.....	.....	3
Business places	47	38	36
Dwellings and stables	198	149	248
Walls	345	573	663
Chimneys	75	66	137
Halls	3	1	.....
Theatre	9	1	.....
Violation of building laws	.....	218	300
Repairs to rain spouts, areas, floors	.....	.....	525
Fire escapes	137	38	54
Furnaces	706	81	75
Electric wiring	268	219	114
Dangerous electric work	.....	155	82
Arches to be made safe	.....	335	.....
Bridge	1	.....	.....
Signs	4	.....	.....
Elevator	783	.....	.....
	2578	1875	2245

INSPECTIONS AND EXAMINATIONS.

There were:

1511 elevator inspections.
1146 elevators registered.
63 miles of electric wires cut down.

STATEMENT OF INCOME FOR PERMITS ISSUED.

	1904.	1903.	1902.
Frame sheds	$4,285 94	$3,312 13	$3,393 75
Rear bay windows	195 40	142 03	436 90
Frame extensions, porches, etc	1,515 27	1,817 58	1,276 48
Bath rooms	275 80	275 35	186 90
Rear awnings	12 00	40 00	20 00
Advertising boilers, sheds, etc	1,880 00	1,205 00	1,022 40
Permits issued by order of the Board of Estimates	5,925 68	5,737 24	13,240 00
	$8,164 41	$12,529 33	$19,577 09

List of Property Under the Supervision of this Department.

City Hall	1
Courthouse	1
City Hall Annex	1
City Jail	1
Administration Building (School Board)	1
Baltimore City College	1
Eastern Female High School	1
Western Female High School	1
Polytechnic Institute	1
Colored High and Training School	1
School Buildings (owned by the city)	112
School Buildings (rented by the city)	25
Engine Houses (Fire Department)	25
Truck Houses (Fire Department)	9
Chemical Engine Companies (Fire Department)	2
Market Houses	11
Public Halls	4
Quarantine Stations	5
City Morgue	1
Belair Lot (shed)	1
City Yard (enclosure)	1
Old Southern Police Station	1
Potter's Field	1
City Dock	1
	213

TABLE

Showing Expenditures on Various Properties.

City Hall	$10,780 43	
City Hall Annex	1,310 94	
City Jail	3,356 53	
Courthouse	15,247 11	
		$30,695 01
Administration Building	$2,443 55	
City College	787 57	
Eastern Female High School	1,112 37	
Western Female High School	4,404 00	
Polytechnic Institute	4,395 01	
Colored High and Training School	1,880 09	
No. 1 School	804 69	
2 "	163 96	
3 "	804 91	
4 "	501 71	
5 "	1,181 54	
6 "	319 18	
7 "	384 60	
8 "	584 42	
9 "	352 16	
10 "	.....	
10 "	.....	
10 "	18 10	
11 "	1,642 08	
12 "	240 36	
13 "	1,894 17	
14 "	906 62	
15 "	7,971 42	
16 "	707 64	
17 "	226 02	
19 "	177 79	
20 "	2,449 23	
21 "	840 79	
22 "	571 55	
23 "	1,063 97	
24 "	268 39	
25 "	539 27	
26 "	424 45	
27 "	518 16	

No. 28	School		$ 514 64
29	"		277 30
30	"		299 25
31	"		482 02
32	"		509 59
33	"		355 74
34	"		383 44
35	"		1,214 87
36	"		400 00
37	"		121 77
38	"		117 78
39	"		956 51
42	"		432 70
43	"		856 49
44	"		297 07
45	"		518 94
46	"		212 37
47	"		2,861 39
48	"		325 99
49	"		
50	"		95 43
51	"		332 29
52	"		66 17
53	"		1,040 95
54	"		312 48
55	"		241 65
55	"		4,301 26
56	"		
57	"		116 28
58	"		2,925 20
60	"		295 61
60	"	Annex	160 48
61	"		280 37
62	"		176 76
63	"		443 31
65	"		671 10
66	"		232 81
67	"		411 81
68	"		3,346 68
69	"		544 80
70	"		352 01
71	"		438 15
72	"		1,026 80

No. 73	School	$1,117 59	
74	"	2,502 58	
75	"	1,847 85	
76	"	503 69	
77	"	468 47	
78	"	606 75	
79	"	942 59	
80	"	614 30	
81	"	819 38	
82	"	225 73	
83	"	5,502 89	
84	"	1,075 07	
91	"	274 57	
92	"	1,355 46	
94	"	1,261 78	
95	"	412 17	
96	"	459 74	
97	"	72 58	
99	"	560 45	
100	"	12 74	
101	"	71 55	
105	"	368 64	
106	"	522 79	
107	"	1,980 58	
108	"	62 43	
109	"	94 38	
110	"	871 58	
111	"	236 29	
112	"	330 55	
113	"	305 16	
114	"	582 63	
115	"	77 56	
116	"	1,339 69	
New Colored School		13,798 52	
			$110,808 76

Rented Buildings.

No. 10	School	$ 85 62	
10	"	78 84	
50	"	9 60	
51	"	145 43	
59	"	75 70	
64	"	141 93	
90	"	173 79	

No. 93	School	$2,048 10	
97	"	394 13	
103	"	385 83	
103	"	152 88	
111	"	107 00	
114	"	214 84	
114	"	5 00	
115	"	24 71	
118	"	181 05	
49	"	88 14	
56	"	195 98	
			$4,508 57

MARKETS.

Belair Market	$ 562 00	
Broadway Market	2,578 93	
Canton Market	148 55	
Cross Street Market	790 29	
Hanover Market	1,024 16	
Hollins Market	33 94	
Lexington Market	514 44	
Lafayette Market	250 26	
Northeastern Market	104 47	
Richmond Market	70 12	
		6,077 16

No. 1 Engine and No. 2 Hook and Ladder Company	$ 223 64	
No. 2 Engine Company	201 86	
3 "	114 43	
4 "	309 45	
5 "	168 04	
6 "	478 48	
7 "	7,642 27	
8 "	118 34	
9 "	1,322 82	
10 "	98 62	
11 "	625 69	
12 "	380 93	
13 "	2,838 11	
14 "	42 91	
15 "	6,463 77	
16 "	40 33	
17 "	616 87	
18 "	165 54	

No. 19 Engine Company	$ 565 64		
20 "	279 99		
21 "	998 98		
22 "	776 25		
23 "	352 58		
24 "	1,155 43		
25 "	4,255 30		
No. 1 Chemical Company	76 05		
No. 1 Hook and Ladder Company	169 08		
4 " "	354 25		
5 " "	113 49		
6 " "	891 72		
7 " "	162 67		
8 " "	157 91		
10 " "	886 02		
11 " "	949 10		
Temporary Engine House, Forest Park	358 43		
		$34,554	99

Morgue	$ 50		
Quarantine	2,428 53		
Fifth Regiment Armory	7 50		
Shed Bowly's Wharf	4 32		
Miscellaneous	781 33		
		$3,222	18

Respectfully submitted,

EDW. D. PRESTON,
Inspector of Buildings.

DEPARTMENT OF PUBLIC IMPROVEMENTS,

SUB-DEPARTMENT HARBOR BOARD.

ANNUAL REPORT

—OF THE—

HARBOR BOARD

—TO THE—

Mayor and City Council of Baltimore

—FOR THE—

FISCAL YEAR ENDED DECEMBER 31, 1904.

BALTIMORE, MD.
WM. J. C. DULANY COMPANY,
CITY PRINTER.

1905.

DEPARTMENT OF PUBLIC IMPROVEMENTS,

Sub-Department Harbor Board,

BALTIMORE, MD.

JANUARY, 1905.

N. H. HUTTON, Harbor Engineer, *President.*

JOHN K. OBER, *Secretary.*

CLARENCE SHRIVER,

GEORGE R. WILLIS,

WALTER B. SWINDELL.

JAMES H. IRVIN, *Clerk.*

REPORT.

OFFICE OF THE HARBOR BOARD OF BALTIMORE,

BALTIMORE, MD., January, 1905.

To the Honorable the Mayor and City Council of Baltimore:

GENTLEMEN—The Harbor Board has the honor to submit herewith its report of the operations of this Sub-Department during the year 1904.

The several sub-divisions of public work in charge of the Board are as follows:

1. Harbor maintenance and improvement, including the maintenance and operation of the tug "Baltimore."

2. Iceboats, their maintenance, repair and operation when required.

3. Wharves, including the construction and repair of all city wharves, bulkheads, etc.; the general supervision of all wharves and bulkheads, with a view to the enforcement of all laws regulating the construction and condition of piers and bulkheads; also the granting of permits to construct, extend or alter piers or bulkheads.

4. The supervision of "anchorages" and the enforcement of all laws and regulations relating to the anchoring of vessels in the harbor.

5. The removal of unsanitary floating matter from the harbor and docks.

6. The reception and disposal of ashes from towboats.

7. As occasion may require, the removal of vessels sunken in the harbor.

8. And (under the opinion of the City Solicitor) the construction of the new system of piers and docks as authorized by Ordinance No. 149, November 10, 1904.

Appropriations, etc., for the year 1904 were as follows:

Salaries (Engineer and Clerk)		$ 5,250 00
Dredging harbor		39,537 00
Iceboats.		
Appropriation	$12,940 00	
From Contingent Fund	5,320 00	
From State	8,000 00	
Received (sundry sources)	250 00	
		26,510 00
Repair of Wharves.		
Appropriation	$5,000 00	
Emergency Fire Fund	2,169 17	
Unexpended balance of 1903	687 72	
		7,856 89
Removal of floating matter		1,350 00
Removal of ashes		1,100 00
Incidentals		500 00
		$82,103 89

HARBOR.

Proposals for such dredging during the year, as the money at command would permit, were opened by the Board of Awards on April 13. Bids were as follows:

	Ship Channel.	Back Basin and Docks.	Middle Branch.
Maryland Dredging and Contracting Co.	12c. cu. yd.	15½c. cu. yd.	15½c. cu. yd.
Sanford & Brooks	13c. cu. yd.	16c. cu. yd.	16c cu. yd.

The contract was awarded to the Maryland Dredging and Contracting Company—the lowest bidder—excavated material to be deposited in the bay, where authorized, by the national government.

No proposals were received for placing material behind the sea wall at old Marine Hospital. In this connection the Board would renew its recommendation of last year as follows:

"It is doubtful if this method (dumping in the river or bay) can be used much longer, even with the present long distance transport to the bay. The filling of the whole water

front of this property to a level of five or six feet above mean low water would very largely increase its commercial value, and it can be readily and cheaply connected by rail with the Baltimore and Ohio and the Western Maryland Tide Water Railroads. The construction of a bulkhead or seawall on the line of the old bulkhead, extending to the upper or northern end of the property would, when 'filled in,' increase the area by over sixty acres, giving a level property of over 180 acres, with a water front of about one mile. The enclosed area might also render possible a great economy in the removal of street dirt by having a place of deposit for it equally accessible by water from all but the northern section of the city."

Operations under this contract were commenced on May 14 and completed on November 15.

There was excavated and deposited in the bay from back basin and docks	71,919	cubic yards
From middle branch, channels and docks	50,735	"
From ship channel (Locust Point)	98,063	"
Making a total of	220,717	cubic yards

This work was distributed as follows:

BACK BASIN AND DOCKS.

Shriver's Corner	475	cubic yards
Along Pratt street	775	"
Between Piers 2 and 3 Light street	806	"
Light and Lee streets	486	"
Foot Battery avenue	1,052	"
Foot of Henry street	4,819	"
Pier No. 10 Light street	712	"
Foot of Webster street	230	"
Foot of Cross street	2,644	"
Foot of Chester street	486	"
Foot of Washington street	471	"
Foot of Canton avenue	1,394	"
Foot of Lancaster street	377	"
Long Dock	1,096	"
In front Reeder's	440	"

Outside bulkhead Harris' Creek Sewer	2,972	cubic yards
Inside bulkhead Harris' Creek Sewer	2,658	"
East of Harris' Creek	9,175	"
North side Schall's	794	"
Jones' Falls below Canton avenue bridge	15,318	"
Back Basin	13,532	"
East side drawbridge	1,913	"
In front drawbridge	320	"
North dock center pier	4,338	"
South dock center pier	4,636	"
	71,919	cubic yards

MIDDLE BRANCH.

Bush street dock	6,849	cubic yards
Bush street channel	24,350	"
Main channel	19,536	"
	50,735	cubic yards
Ship channels	98,063	"

It may be stated generally that all docks in main harbor, from which it was considered necessary to remove sedimentary deposits, were dredged to "hard bottom" or to depths ranging from twelve to eighteen feet at low water, as might be required.

The Back Basin was dredged to re-establish the depth of fifteen feet, including the north and south docks at the eastern end; Jones Falls was redredged below Canton Avenue Bridge to a depth of eighteen feet at low water to form a receptacle to check deposits from above and thus lessen the amount deposited in that portion of the Basin, used for commercial purposes. The ship channel was improved by the extension (on Locust Point side) of the depth of thirty feet from B. & O. piers 23-24, to a point 400 feet above the new emigrant pier of that company for a width of 300 feet and a length of 2,200 feet.

MIDDLE BRANCH—

The Channel to Bush-street dock was redredged to a depth of 16 feet for a width of 100 feet and a length of 1,040 feet. Bush street dock was redredged to depth of 16 feet for a width of 50 feet, a length of 1,400 feet. The main channel above Bayard-street dock was redredged to a depth of 12 feet for a length of 2,150 feet.

Further details of this work will be found in the report of the Superintendent of Dredging hereto appended.

The quantity of dredging done and the amount paid to contractors were as follows:

Back Basin and Docks	71,919 cub. yds., at 15½ cts		$11,147 44
Ship Channel	98,063 " at 12 cts		11,767 56
Middle Branch	50,735 " at 15½ cts		7,863 92
Totals	220,717		$30,778 92

Making the average price $13\frac{945}{1000}$ cents per cubic yard.

The area covered by this work was:

Back Basin and Docks	57,324 square yards.
Middle Branch	31,278 "
Ship Channel	73,333 "
Or a total area of	161,935 square yards.

(Equal to about 33½ acres.)

As the quantity of material dredged was 220,717 cubic yards, the average depth of excavation was about 4 feet.

During January and February the obstruction to navigation by ice, both in the harbor, river and bay, was unprecedented in thirty years. The tug Baltimore, upon which commerce of the port relies for relief, in the harbor, docks, Middle Branch, and in the many creeks inaccessible or dangerous to the iceboats, was continuously and actively engaged under severe strain, both to hull and machinery, though with complete success, as every demand was met promptly and successfully. Much credit is due Capt. Joseph D. Gunby for his work in this direction. During the remainder of the year the tug was in service for regulation of anchorages, general police of harbor, and assisting in work of surveys and dredging.

During and subsequent to the great fire the tug Baltimore rendered great service in assisting the Fire Department, and in the "pulling down" of dangerous walls where within reach of hawsers from the boat.

The iron frames (or ribs), braces, keelsons, etc., which form the main body of the hull, as do the ribs, spine, etc.,

form that of the man, were built and put together in 1857, forty-seven years ago and are still in the boat, though very much decayed and weakened and entirely unfit for receiving new plating. With the exception of the forward cabin and deck most of the wood work has been in the boat for twenty-nine years. The machinery has been in the boat for twenty-nine years, if not forty-seven years, the only betterments to it being the steeple compounding of the old cylinder and the application of steam reversing gear. In short, the boat is no longer fit for the service expected of it in winter, and a new boat has become a necessity and should be provided for in the estimate for 1906.

Expenditures on this account were:

Advertising		$ 35 20
Dredging		30,778 92
Supervision of Dredging		1,372 63
Surveys		222 50
TUG "BALTIMORE"—		
Crew	$4,435 25	
Fuel	711 10	
Repairs	1,694 10	7,127 75
Steamboat supplies	251 30	
Life raft	36 00	
Total expenditure		$39,537 00

ICEBOATS.

The iceboats were in service for the relief of commerce from obstruction by ice from January 4 to March 5; the ice throughout this period was unusually heavy and dangerous; said to be the worst for navigation in thirty years. The work of the boats was necessarily very severe and continuous, as also very expensive. It is believed, however, that the commerce of the port was not obstructed or hindered seriously, in so far as the navigation of the channels in the river and bay was concerned.

The preparation of plans and specifications for new boilers for the "Latrobe" is under way, and it is expected that the

Board will be ready during February 1905, to advertise for proposals for the work, which will insure readiness of the boat for service during winter of 1905-6.

During the summer the following excursions were made by order of Council:

Free Summer Excursion Society—12 trips	15,599	passengers.
City Council	69	"
Home for Incurables	55	"
Aged Peoples' Outing	392	"
The Order of the Eagles	522	"
Real Estate Exchange	160	"
Baltimore Sanitary and Contracting Company	240	"
Total of passengers carried	17,037	"

This boat was also employed by Mr. Wm. Flaherty, contractor for the Baltimore Light House to be located at entrance to ship channels, to float the foundation caisson, which had jammed on the shore at Lazaretto Point while being launched, and which had resisted all efforts of tug boats to move it.

Details of the movements of the Iceboats during the ice period (January and February) will be found in the appended reports of the masters of the iceboats.

EXPENDITURES ON THIS ACCOUNT WERE.

	Annapolis.	Latrobe.
Crew	$2,015 93	$8,929 60
Fuel	1,214 22	2,771 20
Repairs	177 03	648 41
Life preservers and awnings		766 00
Subsistence	368 03	1,049 64
Steamboat supplies	85 10	217 22
Wharfage	250 00	
Advertising	8 81	8 81
Total from city appropriations	$4,119 12	$14,390 88
		4,119 12
Total both boats		$18,510 00

EXPENSES "ANNAPOLIS"—STATE APPROPRIATION.

Crew	$5,000 00
Fuel	2,000 00
Subsistence	800 00
Steamboat supplies	200 00
Total	$8,000 00
Total expenditures for both boats	$26,510 00
Total available money city and State, etc	26,510 00

REPAIRS OF WHARVES.

The great fire of February last practically swept away all buildings and the perishable parts of wooden piers, between Bowly's wharf and Jones' Falls south of Pratt street, and only absolutely necessary and temporary repairs have been made to any of the wharves in this district, and these mainly through an allotment from the Emergency Fire Fund made by the Board of Estimates.

Outside of the Burnt District the principal work done was on bulkheads in the Back Basin, at Quarantine Station and at old Marine Hospital.

Work done was as follows:

BOWLY'S WHARF—
Rebuilding above piles of 250 feet in length.....cost, $1,081 90

COMMERCE STREET WHARF—
Rebuilding above piles, 1,500 square feet.....cost, 450 00

LONG DOCK—
Rebuilding wooden platforms, etc.....cost, 659 47

BACK BASIN—
Rebuilding wooden bulkhead foot of Chrome Works, cost, 1,232 99

QUARANTINE STATION—
442 cubic yards rip-rap foot of sea wall and repairs to wharf.....cost, 741 73

OLD MARINE HOSPITAL—

Extending bulkhead 400 foot with broken brick 2,109 cubic yards	$674 77	$1,374 77
Dredging	675 00	
Mooring piles	25 00	

FOOT OF CHARLES STREET—		
Renewal of floor plank.....cost,		43 20
FOOT OF HUGHES STREET—		
Repairs to bulkhead.....cost,		26 60
HEAD OF MCCLURE'S DOCK—		
Temporary fence (labor only).....cost,		2 00
CALVERT STREET WHARF—		
Repairs of flooring, etc .....cost,		10 24
General supervision of all wharves.....cost,		939 25
Total expenditures.		$6,562 15

REMOVAL OF ASHES FROM TOWBOATS.

The scow used for the reception of ashes was in service during the year with the exception of four days, when it was hauled on railway for necessary repairs to planking, during which time a hired scow replaced it at the receiving station. During the year there was received from 64 towboats and 4 steamboats 39,273 bushels of ashes. Of this amount one (1) scow load was unloaded at the expense of the city, eight (8) scow loads and five (5) schooner loads were taken away and deposited on shore without cost to the city.

Expenditures were:

Supervisor of scow.....	$625 00
Repairs.....	252 86
Scow hire.....	25 50
Unloading scow.....	21 00
Miscellaneous supplies—Oil, rope, paint, etc.....	25 93
Total.....	$950 29

REMOVAL OF FLOATING MATTER.

The removal of unsanitary or dangerous floating matter from the harbor and docks was carried on as heretofore during the summer, from May to October, with the usual force of from two to three boats, as circumstances require, each boat having two boatmen, the force being under control of a superintendent who reports daily to the office. The harbor and

docks have been kept practically clean from all material, which under the most liberal interpretation could be construed as "injurious."

Expenditures were as follows:

Wages	$1,203 00
Outfit, nets, etc	17 60
	$1,220 60

WHARF PERMITS, 1904.

NO.	NAME.	LOCATION.	GRANTED.
69	Balto. Ches. & At. R. Co.	Repair foot South st	February 18.
70	Mer. & Min. Trans. Co	Repairs to piers	February 23.
71	Weems Line	Repairs foot Commerce st	February 23.
72	Old Bay Line	Repairs to piers	February 23.
73	Wm. Leyshon	Wharf and causeway, Soller's Shore	March 2.
74	Balt., Ches. & At. R. Co.	Fender piles ft. South st.	March 5.
75	Frank Brown	Repairs east side Patterson's Dock	March 28.
76	Balto. Copper Smelting and Rolling Co	Extension between 4th and 5th avenue	April 22.
77	Park Commissioners	Bulk in front Swann Park	May 4.
78	Canton Co.	Pier east of Chester st	May 11.
79	Spring Garden Wharf and Land Co	To fill in near ft. Bush st.	June 15.
80	Canton Co	Pier west of Chester st	June 15.
81	G. C. Wilkins, Gen. Agt.	Bulk at Abbott's wharf	August 23.
82	Consolidated Gas Co.	Extension ft. Randall st.	August 30.
83	Old Bay Line	Ex'sion adjoining Pier 10	September 7.
84	Canton Co	Fender foot Patuxent st.	Septem'r 24.
85	Canton Co	Ex'sion at Harris' Creek.	October 6.
86	Louis Grebb	Platform ft. Montford av.	October 10.
87	Mon. Iron and Met. Co	Piling foot Howard st	Novem'r 16.

NEW PIERS AND DOCKS.

The great conflagration of February 7-8 practically "wiped out" all buildings, and the combustible part of all sheds, wharves, etc., between Bowly's wharf and Jones' Falls, south of Pratt street.

The existing condition and arrangement of the piers and docks in this section of the water front was a relic of the olden times, when a 500 ton vessel was considered a *very* large one, and was evidently entirely inadequate to fill the requirements of commerce as it is carried on to-day.

With a full appreciation of this fact the city authorities procured authority from the State, under the $6,000,000 loan, to obtain by purchase or condemnation all property rights within this section, and to establish thereon a system of piers and docks suitable to the requirements of the port.

The City Solicitor has decided that, after the Burnt District Commission has secured the property, the construction of the piers and docks contemplated should be carried out under the direction of the Harbor Board, in accordance with the general plan as provided for by ordinance of the Mayor and City Council.

In order to be prepared for the prompt advertising for proposals for this work whenever the property was secured, certain preliminary surveys and work on details of pier construction were necessary.

For this purpose an allotment of $10,000 was obtained during the latter part of October. Under this the following work has been done or is in progress:

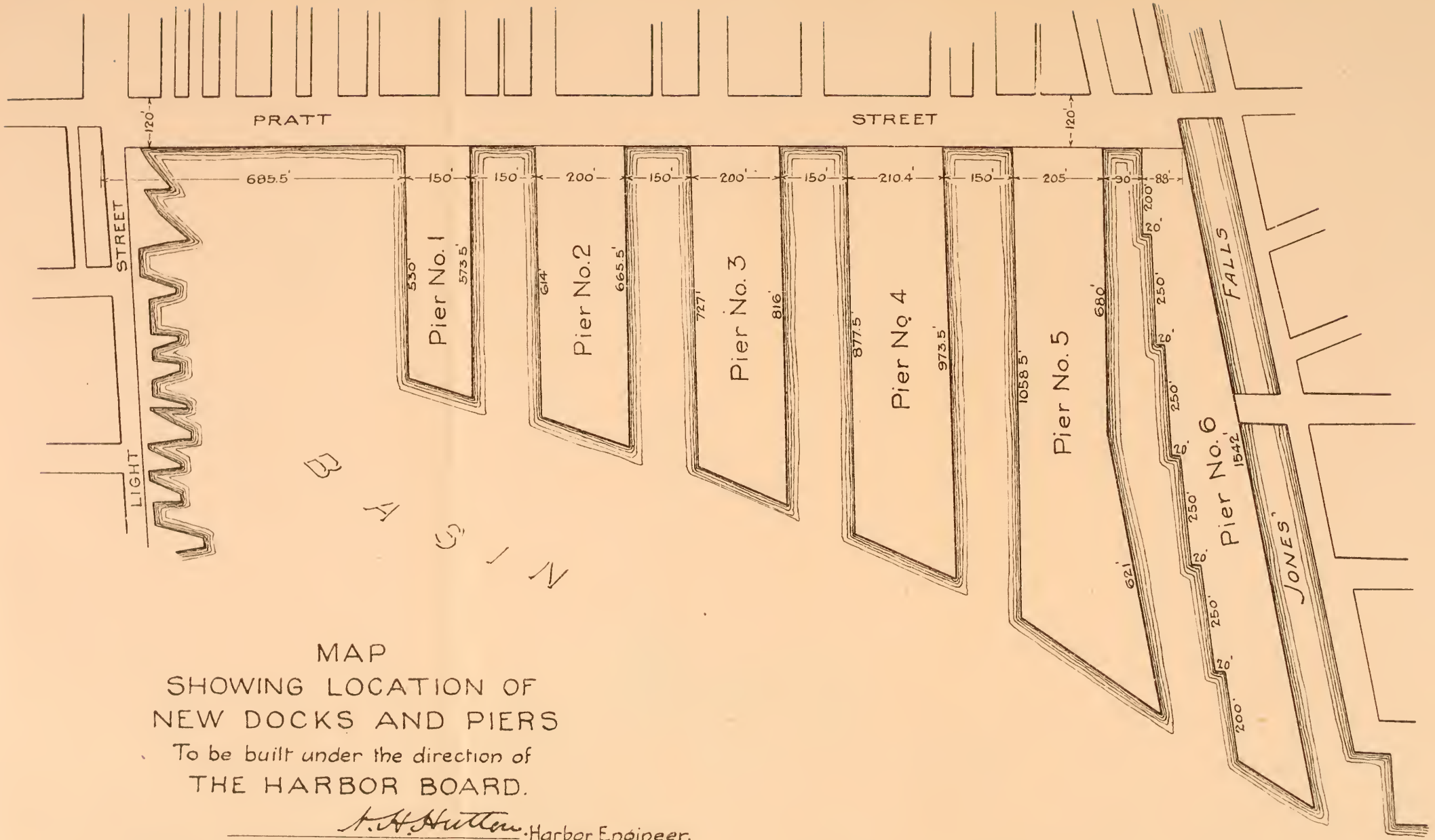
As there was no room in the City Hall for the necessary force of Engineers, Inspectors, etc., a site was selected on Smith's dock (foot of Gay street), about midway of the district to be improved. On this a frame office building, 30 by 40 feet, has been constructed at a cost of	$1,615 34
Furniture, etc	221 92
Instruments, etc	563 17
Engineers, etc	612 76
Total expenditures to December 31	$3,013 19

All necessary surveys have been made and plotted; stones have been set to mark positions of new piers; and plans, details and specifications are so well under way that the work can be advertised for proposals during January, 1905.

For details of expenditures and work done you are respectfully referred to annexed tabular statements:

Respectfully submitted,

N. H. Hutton,
John K. Ober,
Clarence Shriver,
Geo. R. Willis,
Walter B. Swindell.



MAP
SHOWING LOCATION OF NEW DOCKS AND PIERS
To be built under the direction of
THE HARBOR BOARD.

A. N. Hutton, Harbor Engineer.

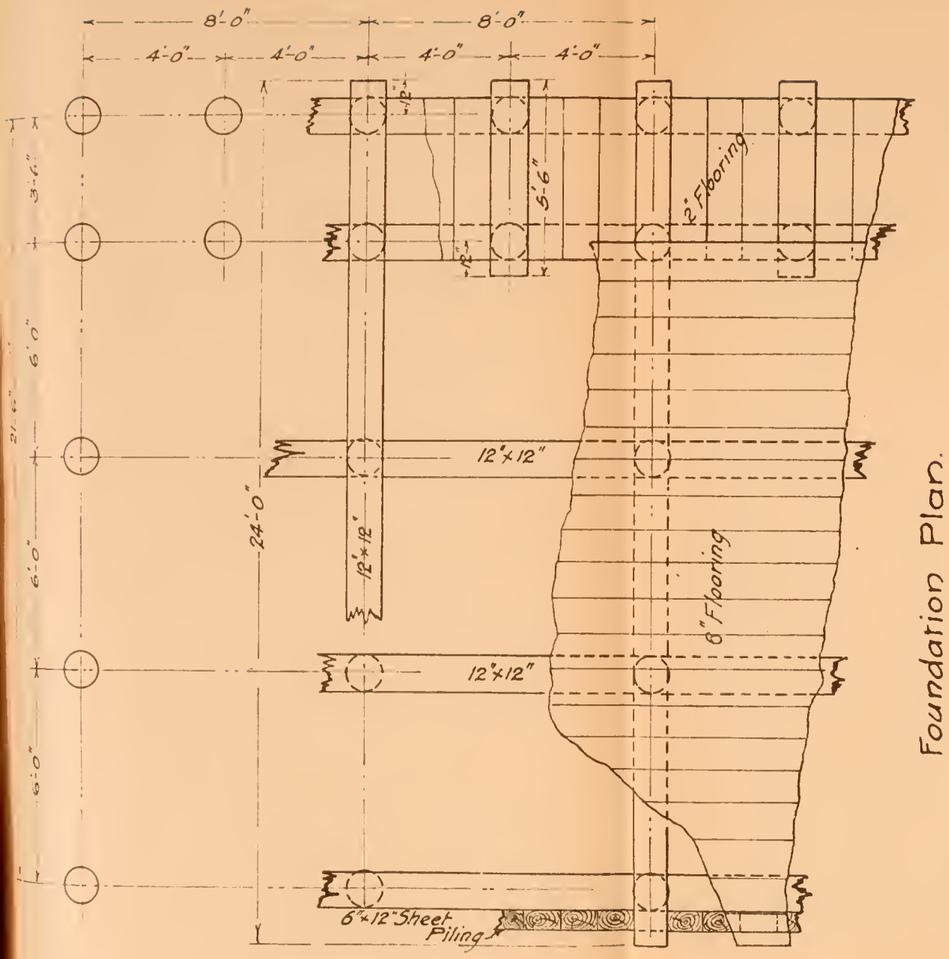
Scale: 0 100 200 300 400 500 600 FT.

Photo-Lith. by A. Hoen & Co., Baltimore.

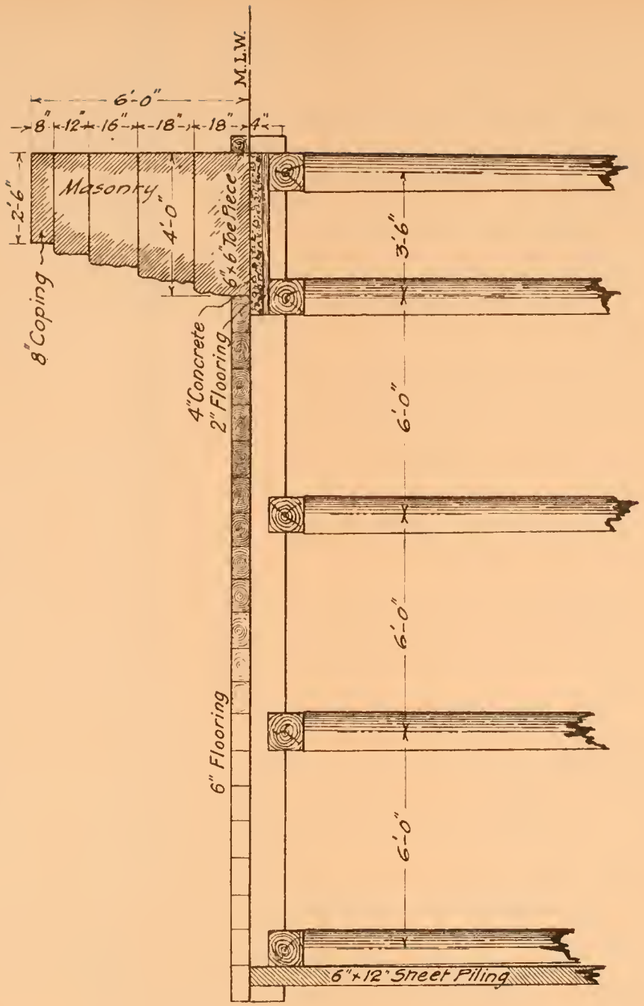
GENERAL CONSTRUCTION PLAN
DOCK WALLS AND BULKHEADS
FOR THE
NEW PIERS AND DOCKS;
TO BE BUILT UNDER THE DIRECTION OF
THE HARBOR BOARD.

JANUARY 1905.

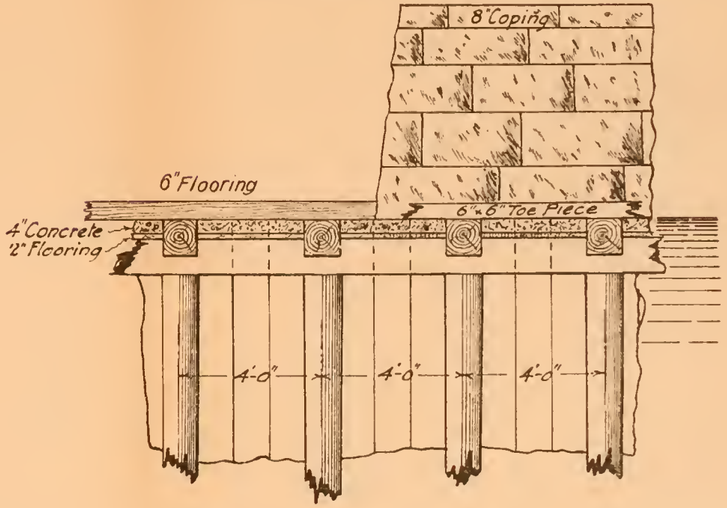
N. H. Hutton. HARBOR ENGINEER.



Foundation Plan.



Vertical Section.
Showing Wall.



Elevation.

SCALE: 1/4 IN. = 1 FT.

Photo Lith. by A. Hoen & Co., Baltimore

TABLES.

HARBOR.

YEAR ENDED DECEMBER 31, 1904.			DR.	CR.
Appropriation.				
Ordinance No 21, November 19, 1903				$39,537 00
Expenditures.				
Maryland Dredging and Contracting Company.	98,063 cubic yards	12 c.	$30,778 92	
	71,919 "	15½c.		
	50,735 "	15½c.		
Advertising			35 20	
Supervision of dredging			1,372 63	
Surveys			222 50	
Tug Baltimore:				
Crew		$4,435 25		
Fuel		711 10		
Repairs		1,577 02		
Steamboat supplies		251 30		
Life raft		36 00		
Repairs Schooner Van Name account collision		117 08	7,127 75	
			$39,537 00	$39,537 00

SALARIES.

YEAR ENDED DECEMBER 31, 1904.	DR.	CR.
Appropriation.		
Ordinance No. 21, November 19, 1903		$5,250 00
Expenditures.		
Salaries	$5,250 00	
	$5,250 00	$5,250 00

ICEBOATS.

YEAR ENDED DECEMBER 31, 1904.			DR.	CR.
Appropriations.				
Ordinance No. 21, November 19, 1903				$12,940 00
From Contingent Fund				5,320 00
Received for sundry services of iceboats				250 00
Expenditures.				
	*Annapolis.	F. C. Latrobe.		
Advertising	$ 8 81	$ 8 81		
Crew	2,015 93	8 929 60		
Fuel	1,214 22	2,771 20		
Repairs	177 03	648 41		
Steamboat supplies	85 10	217 22		
Subsistance	368 03	1,049 64		
Wharfarge	250 00			
Life preservers and awnings		766 00	$18,510 00	
	$4,119 12	$14,390 88	$18,510 00	$18,510 00

*See "State Appropriation."

INCIDENTALS.

YEAR ENDED DECEMBER 31, 1904.		DR.	CR.
Appropriations.			
Ordinance No. 21, November 19, 1903			$500 00
Expenditures.			
Telegrams, oaths, etc	$7 07		
Stamps	10 00		
Car tickets	10 00		
Directory	6 00		
Cabinet	3 55		
Annual reports	6 50		
Advertising	27 23		
Asst. Engineer and drawings	170 58		
Cigars for Board	60 00		
Lunch (Board meetings on boat)	105 00		
To Annapolis (account State appropriation)	13 25		
		$419 18	
Unexpended balance		80 82	
		$500 00	$500 00

REMOVAL OF ASHES.

YEAR ENDED DECEMBER 31, 1904.		DR.	CR.
Appropriation.			
Ordinance No. 21, November 19, 1903.			$1,100 00
Expenditures.			
Supplies	$ 25 93		
Supervision of scow and dump.	625 00		
Repairs	252 86		
Discharging scow	21 00		
Scow hire	25 50		
		$950 29	
Unexpended balance		149 71	
		$1,100 00	$1,100 00

REMOVAL OF FLOATING MATTER.

YEAR ENDED DECEMBER 31, 1904.	DR.	CR.
Appropriation.		
Ordinance No. 21, November 19, 1903.		$1,350 00
Expenditures.		
Wages	$1,203 00	
Outfit	17 60	
Unexpended balance	129 40	
	$1,350 00	$1,350 00

REPAIRS OF WHARVES.

YEAR ENDED DECEMBER 31, 1904.		DR.	CR.
Appropriations.			
Unexpended balance of 1903			$ 687 72
Ordinance No. 21, November 19, 1903			5,000 00
Ordinance No. 146, November 10, 1904			2,169 17
Expenditures.			
Unexpended balance of 1903—not used			
Repairs, account Ordinance No. 21:			
Repairs Long Dock	$ 22 20		
Back Basin	1,232 99		
Foot Charles Street	43 20		
Quarantine Wharf and Sea Wall	741 73		
Old Marine Hospital	1,374 77		
Foot Calvert Street	10 24		
Foot Hughes Street	26 60		
Head McClure's Dock	2 00		
		$3,453 73	
General supervision		939 25	
Repairs, Account Ordinance No. 146:			
Repairs Long Dock	$ 637 27		
Commerce Street Wharf	450 00		
Bowly's Wharf	1,081 90		
		2,169 17	
Unexpended balance		1,294 74	
		$7,856 89	$7,856 89

PUBLIC WHARVES AND DOCKS.

YEAR ENDED DECEMBER 31, 1904.		DR.	CR.
Appropriation.			Ord. No. 149 Nov. 10, 1904
Expenditures.			
Office building and fittings (Smith's Dock)	$1,837 26		
Engineering	1,175 93		
		$3,013 19	
		$3,013 19	

STATE APPROPRIATION.

YEAR ENDED DECEMBER 31, 1904.		DR.	CR.
Appropriation.			
Chapter 687, Acts of 1904			$3,000 00
Chapter 688, Acts of 1904			5,000 00
Expenditures.			
*Iceboat Annapolis:—			
Crew	$5,000 00		
Repairs	2,000 00		
Steamboat supplies	200 00		
Subsistence	800 00		
		$8,000 00	
		$8,000 00	$8,000 00

*See "Iceboats."

Respectfully submitted,

JAMES H. IRVIN, *Clerk*

Approved:

N. H. HUTTON, *Harbor Engineer.*

EXTRACT FROM LOGS OF ICEBOATS

ICE SEASON, 1904.

NO ACCOUNT OF VESSELS USING "TRACK" NOT CONVOYED.

ANNAPOLIS.

Jan. 4.

Jan. 5.
City to Sandy Point.
Returning—
Tug Sandow.
Schr. Henry O. Barrett.
Tug Wm. H. Yerkes.
4 Oyster Boats.
Tug Dauntless.
2 Vessels.
Stmr. Queen Caroline.

Jan. 6.
City to Canton and Elevator 3--
Broke ice.
Thence to Curtis Bay—
Tug Caroline.
Barge.
Thence to Hawkins' Point—
Tug Jesse Tyson.
Tug John H. Riehl.
Scow.
Returning to city—
Tug Hercules.
Tug Emma.
Tug Sea King.
8 Oyster Boats.

F. C. LATROBE.

Jan. 4.
City to Curtis Bay—
Broke ice B. & O. Piers.
Thence to Craighill—
Tug Oriole.
Schr. Ella C. Ells.
Returning—
Tug George's Creek.
3 Barges.

Jan. 5.
City to Elevator No. 3—
Broke ice.
Thence to Curtis Bay—
Broke ice B. & O. Piers.
3 Barges fast in ice.
Thence down river.
Returning to city—
SS. Joseph Di Giorgio.
City to lower end Craighill.
Returning to city—
Stmr. St. Mary's.

Jan. 6.
City to Thomas' Point—
Tug Savage.
Tug Piedmont.
3 Barges.
Returning to Steelton—
Tug Britannia.
Schr. Gardiner E. Deering.
Tug Sarah.
Tug Uncle Sam.
5 Oyster Boats.
Broke ice around piers.

ANNAPOLIS.

Jan. 7.
City to lower end Craighill—
Stmr. Koln.
Stmr. Calvert.
Thence to North Point—
Stmr. Ida.
North Point to Craighill—
Tug Yerkes.
3 Schooners.
Tug Savage.
Schr. Malcolm B. Seavey.
Thence to Curtis Bay—
Towed Tug E.V.McCauley. (in distress).
Thence to Canton—
Broke ice to elevator.
Tug Rieman.
Ship Brothy.
Thence to Steelton—
Broke ice to docks.
Thence to Columb'n Iron Wks.
Broke into dock.

Jan. 8.
City to Steelton—
Broke ice around Stmrs. Nantucket and Jamestown.
Thence to Curtis Bay—
Tug Caroline.
Stmr. O'Neill.

Jan. 9.
Down and up river—
Tug George's Creek.
Tug Savage.
2 Barges.
Tug Radiant.
2 Barges.
Tug Sea King.
3 Oyster Boats.
Tug Dauntless.
3 Oyster Boats.
Thence to Chester River—
Stmr. Caroline.
Pulled off Stmr. Evelyn (ashore).
Assisted Stmr. Vedamore.

F. C. LATROBE.

Jan. 7.
City to lower end Craighill.
Returning to North Point—
5-Master.
Thence to lower end Craighill--
Tug Buccaneer.
Barge.
Thence to Annapolis Roads—
Tug Hercules.
Tug Sandow.
Barge.
SS. M. F. Plant.
Thence to Annapolis—
Tug Tormenter.
3 Barges.
Tug Volunteer.
Schr. Dorothy Palmer.

Jan. 8.
Annapolis to Steelton—
Tug Tormenter.
2 Barges.
Tug Volunteer.
Schr. Dorothy Palmer.
Returning to Annapolis Rds.—
Stmr. Northumberland.

Jan. 9.
Annapolis to North Point—
Stmr. Susquehanna.
Tug Sea King.
4 Oyster Boats.

ANNAPOLIS.

Jan. 10.
Love Point to North Point—
Queen Caroline.
Thence to Sandy Point—
Stmr. Calvert.
Stmr. Ida.
Stmr. Danville.
Stmr. St. Mary's.
Stmr. Jessamine.
Returning to city—
Tug Sea King.
5 Oyster Boats.

Jan. 11.
City to Elevator No. 3—
Broke ice.
Thence to Hawkins' Point—
Tug J. H. Riehl.
Scow.
Thence to Cut-off—
Pulled off Chesapeake (ashore).
Helped pull off Howard.
Tug Britannia.
Bark Good News.
Tug Sea King.
4 Oyster Boats.
Thence to city.

Jan. 12.
City to Sandy Point—
Stmr. Oakland.
Returning to city—
Tug Easby.
3 Oyster Boats.

F. C. LATROBE.

Jan. 10.
City to Sandy Point—
Stmr. Calvert.
Stmr. St. Mary's.
Stmr. Middlesex.
Stmr. Ida.
Stmr. Danville.
Went to Schr. Henry S. Little (ashore).
Sandy Point to below—
Tug Oriole.
Tug Easby.
Schr. Susie H. Davidson.
Thence to Annapolis—
Tug Wm. H. Yerkes.
4 Oyster Boats.

Jan. 11.
Annapolis to city—
Tug Hercules.
Tug Yerkes and tows.
Helped pull off Stmr. Howard (ashore lower end Cut-off).

Jan. 12.
City to Sandy Point—
SS. Joseph Di Giorgio.
SS. Jamestown.
Returning to North Point—
Tug Sea King.
Barge Dennis Simmons.
Tug Volunteer.
3 Oyster Boats.
Returning down channels.
Thence to Annapolis.

ANNAPOLIS.

Jan. 13.
City to Annapolis—
Stmr. Susquehanna.
Returning to city.

Jan. 14.
City to North Point—
Tug Sea King.
3 Oyster Boats.
Tug Dauntless.
Oyster Boats.
Thence to Sandy Point—
Tug Volunteer.
3 Oyster Boats.
Thence to Curtis Bay.
Curtis Bay out—
Tug Hoskins.
Tug Peerless.
Schr. Dorothy Palmer.
Skipjack Helen Little.
Fort Carroll to Elevator 3—
Heavy ice.
Thence to city.

Jan. 15.
City to Sandy Point.
Thence to Claiborne Wharf.
Thence to Oxford—
Schr. Gen. Hardcastle.

F. C. LATROBE.

Jan. 13.
Annapolis to Sandy Point—
Stmr. St. Mary's.
Sandy Point to Steelton—
Stmr. Augusta.
Stmr. Danville.
Stmr. Calvert.
Returning down channels.
Returning to Fort Carroll—
Tug Hoskins.
Tug Peerless.
7 Oyster Boats.
Thence to lower end Craighill—
SS. Evelyn.
SS. Katahdin.
Thence to city—
SS. Bluefields.

Jan. 14.
City to Seven-Foot Knoll—
Stmr. Calvert.
Stmr. Northumberland.
Returned to city for repairs.

Jan. 15.
City to Elevator No. 3—
Broke ice.
Thence to upper end Cut-off—
Schr. John E. Devlin ashore; alongside all night.

ANNAPOLIS.

Jan. 16.
Oxford to Cambridge.
Returning to Oxford—
Assisted Oyster Boats.
Schr. Ella Faulkner.
Thence to city.

Jan. 17.
City to Cut-off—
Pulled off Schr. Ellen M. Golden (ashore).
Returning to city.

Jan. 18.
City to Cut-off.
Returning to city.

Jan. 19.
City to Sandy Point—
Stmr. Augusta.
Stmr. Calvert.
Stmr. Howard.
Tug Tormenter.
Schr. Annie Golden.
Tug J. Hoskins.
Schooner.
Returning to city—
Stmr. Lord Earne.

Jan. 20.
City to Annapolis—
Stmr. Susquehanna.
Annapolis to Sandy Point—
Stmr. Susquehanna.
Sandy Point to Annapolis.

F. C. LATROBE.

Jan. 16.
Cut-off to Fort Carroll.
Thence to Rock Creek.
Broke ice to Gov't Wharf,
Thence to Steelton.
Steelton to Cut-off—
Floated Schr. John E. Devlin, 4.30 P.M.
Thence to city—
Schr. Devlin.
Tug Volunteer.

Jan. 17.
Under repairs.

Jan. 18.
City to Seven-Foot Knoll.
Thence to Sparrow's Point—
Stmr. Holly ashore; floated her.
Relieved Tug Oriole.
Relieved Barge Kent.
Broke ice to shipyard,
Thence to Curtis Bay—
Schr. Henry S. Little ashore; floated her.

Jan. 19.
City to Sandy Point—
SS. Tampico.
Thence to North Point—
Tug Piedmont.
2 Barges.
North Pt. to lower end Cut-off.
Returning to North Point—
Tug J. S. Hoskins.
3 Oyster Boats.
Thence to Annapolis.

Jan. 20.
Annapolis Roads to city—
Towed Tug Buccaneer (sinking).
Tug Brilliant.
Repairs.

ANNAPOLIS.

Jan. 21.
Annapolis to above Sandy Pt.--
Stmr. Mackinaw.
Thence to city—
Stmr. Gaston.
Tug Savage.
Tug Piedmont.
2 Barges.
Tug Radiant.
2 Barges.
Tug Sandow.
Tug Vulcan.
5 Oyster Boats.

Jan. 22.
Thick Fog.

Jan. 23.
City to Sandy Point—
Stmr. Pilot.
Stmr. Salvator.
Stmr. Di Giorgio.
Thence to Annapolis.
Thence to city.

Jan. 24.
City to Sandy Point—
Stmr. St. Mary's.
Thence to Fort Carroll—
Broke out Tug Britannia.
Ship Queen Elizabeth.
Tug J. D. Hoskins.
Barkentine Joseph. Baugh.
Up and down channels.

Jan. 25.
City to coal dock and return.

F. C. LATROBE.

Jan. 21.
City to Sandy Point—
SS. Drumelzier.
Thence to Cut-off—
Tug Piedmont.
Tug Cumberland.
4 Barges.
Thence to Seven-Foot Knoll—
Stmr. Gaston.
Tug Sandow.
Tug Vulcan.
5 Oyster Boats.
Returning to Annapolis Rds.—
SS. George Dumas.

Jan. 22.
Thick Fog.

Jan. 23.
Annapolis to St. Michaels.

Jan. 24.
Broke ice up Miles River.
Thence to Seven-Foot Knoll.
Thence to city—
School Ship Amerigo Vespucci.
Thence up and down channels.

Jan. 25.
City to Sandy Point—
Tug Sea King.
Schr. Jas. Hoskins.
Schr. Ed. G. Hight.
Towed Sloop J. A. Price to clear water.
Thence to Seven-Foot Knoll—
Tug Sarah.
4 Oyster Boats.
Tug Easby.
20 Oyster Boats.
Returning—
Tug Peerless.
Tug Volunteer.
Schr. Isabella Gill.
2 Barges.

ANNAPOLIS.

Jan. 26.
City to Chestertown—
Stmr. Corsica.

Jan. 27.
Chestertown to North Point—
Stmr. Corsica.
Thence to Annapolis.

Jan. 28.
Annapolis to ice jam, Sandy Point.
Thence to Annapolis—
Bugeye John W. Dean.
Tug Sarah.
5 Oyster Boats.
Tug Volunteer.
2 Barges.
Returning to city—
Tug Sarah.
4 Oyster Boats.

F. C. LATROBE.

Jan. 26.
City to Sandy Point—
Tug Radiant.
Barge.
Returning to Seven-Ft. Knoll.
Thence to Sandy Point—
Tug Cumberland.
Stmr. Frostburg.
2 Barges.
Returning to North Point—
Tug Volunteer.
Schr. Benj. C. Frith.
Tug Sea King.
Sch. Phineus W. Sprague.
Tug Hanson Keys.
2 Oyster Boats.
Tug Hamilton.
Schr. Edith H. Symington.

Jan. 27.
City to Sandy Point—
SS. Mackinaw.
Stmr. Dennis Simmons.
Returning to Seven-Ft. Knoll--
Tug Britannia.
Schr. Edward J. Berwind.
Thence to Sandy Point—
Tug Cumberland.
2 Barges.
Stmr. Bache.
Sandy Point down—
Tug Buccaneer.
Schr. John E. Devlin.
Schr. Ed. E. Briry.
Returning to Sandy Point—
Tug Sea King.
Schr. Sagamore.
Schr. Henry S. Little.
Sandy Point up—
Tug Easby.
Schr. Van Lear Black.
Tug Hamilton.
6 Oyster Boats.

Jan. 28.
City to Annapolis—
Stmr. Violet.
Returning to Seven-Ft. Knoll.
Thence to Sandy Point—
Tug Sea King.
Stmr. Gaston.
Thence to Annapolis—
Tug J. S. Hoskins.
Schr. Mount Hope.

ANNAPOLIS.

Jan. 29.
City to down channels.
Returning to city—
Stmr. Maryland.
Stmr. Virginia.
Stmr. Westmoreland.
Stmr. City of Philadelphia.

Jan. 30.
City to Sandy Point—
Stmr. Atlanta.
Stmr. Alabama.
Returning to city—
Tug Britannia.
Tug John E. Lewis.
Ship Lord Shaftsbury.
Tug George's Creek.
Tug Savage.
4 Barges.
City to Annapolis.

Jan. 31.
Annapolis to North Point.
Thence to Fort Carroll—
Stmr. Beatrice.
Stmr. Westmoreland.
Then up and down channels.

Feb. 1.
City to Sandy Point.
Sandy Point to Magothy.

F. C. LATROBE.

Jan. 29.
Annapolis to North Point—
Tug J. S. Hoskins.
Schr. Mount Hope.
Returning to Cut-off.
Thence to Steelton—
Stmr. Philadelphia.
Stmr. Cambridge.
Stmr. Joppa.
Stmr. Northumberland.
Stmr. Chesapeake.
Returning to Sandy Point.
Thence to Annapolis—
Stmr. St. Mary's.

Jan. 30.
Annapolis to city—
Stmr. St. Mary's.
Stmr. Susquehanna.
City to Curtis Bay—
Broke out Stmr. J.Levinus.
Broke ice in Curtis Bay.
Back to city.

Jan. 31.
City to Sandy Point—
Stmr. Charlotte.
Stmr. Augusta.
Relieved Schr. Magnolia, Pungy C. A. Kirwan, Bugeye L. H. Taws, fast in ice mouth Magothy.
Thence to Annapolis.
Returning to Sandy Point.
Back to Annapolis.

Feb. 1.
Annapolis to Seven-Ft. Knoll--
Tug Albert H. Ellis.
4 Barges.
Tug Tomenter.
2 Barges.
Up and down channels—
Stmr.Enoch Pratt.
Stmr. Potomac.
Stmr. Susquehanna.
Stmr. Eastern Shore.
Stmr. Queen Caroline.
Stmr. Ida.
Stmr. Calvert.

ANNAPOLIS.

Feb. 2.
Magothy to Sandy Point.
Thence to below Sandy Point--
Stmr. Westmoreland.
Thence to Cut-off—
Tug Sidney.
5 Oyster Boats.
Thence to Chester River—
Stmr. Queen Caroline.
Returning to city.

Feb. 3.
City to North Point.
Thence to end of Cut-off—
Tug Sandow.
5 Oyster Boats.
Tug Sea King.
Schr. Mount Hope.
Thence to Seven-Foot Knoll—
Lighthouse Stmr. Holly to land man.
Thence to City.
Repairs.

Feb. 4.
City to Canton Elevator—
Broke ice.
Thence to Cut-off.
Returning to North Point—
Tug Sarah.
Schr. Jas. Ward.
Returning to city.

Feb. 5.
City to Elevator.
Thence to Cut-off—
Tug Reliance.
Schr. Wm. B. Palmer.
Stmr. Calvert.
Returning to North Point.
Thence to Sandy Point—
Tug Curtain.
5 Oyster Boats.
Thence to Annapolis.

F. C. LATROBE.

Feb. 2.
City to Seven-Foot Knoll—
Stmr. St. Mary's.
Stmr. Tivoli.
Returned to city.
Thence to Sandy Point—
Italian Warship Amerigo Vespucci.
Back to city.

Feb. 3.
Repairs.

Feb. 4.
City to Steelton.
Thence to lower end Craighill--
SS. Trojan.
Returning to North Point—
SS. Polla.
Thence to Sandy Point.
Sandy Point down—
Tug Francis.
3 Vessels.
Thence to mouth Chester Riv.
Thence to Craighill channel—
Stmr. Queen Caroline.
Thence to Annapolis.

Feb. 5.
Annapolis to Sandy Point.
Sandy Pt.--Through ice gorge-
Tug Defiance.
Schr. W. B. Palmer.
Returning to city—
Tug Sarah.
2 Vessels.

ANNAPOLIS.

Feb. 6.
Annapolis to North Point—
Tug Yerkes.
2 Oyster Boats.
Tug Peerless.
2 Oyster Boats.
Returning to Cut-off—
Tug Helen Ellis.
6 Barges.
Thence to city.

Feb. 7.
Heavy fog morning—City to North Point—
Stmr. Merina.
Thence to Cut-off.
Returning to city—
Tug Sea King.
Schooner.
Tug Curtin.
Schr. Adams.

Feb. 8.
Repairs.

Feb. 9.
Repairs.

Feb. 10.
City to Sandy Point.
Thence through ice jam—
Stmr. Queen Wilhelmina.
Stmr. Hectar.
Stmr. Eastern Shore.
Stmr. Virginia.
Stmr. Ida.
Stmr. St. Mary's.
Stmr. Maryland.
Thence to city—
Stmr. Cambridge.

F. C. LATROBE.

Feb. 6.
City to lower end Craighill—
SS. Missouri.
Returning to Seven-Ft. Knoll.
Thence to Sandy Point—
Tug Sarah.
5 Oyster Boats.
Relieved from ice jam—
Tug Helen.
5 Oyster Boats.
Returning to Seven-Ft. Knoll--
Tug Sandow.
Tug Emma.
Barge Chickahominy.
Thence to Sandy Point—
Tug Albert E. Ellis.
6 Barges; one ashore; floated her after 2 hours' work.
Thence to Annapolis.

Feb. 7.
Annapolis to Craighill channel.
Convoyed up channels—
Tugs Sea King, Dauntless, Loretta Spedden, with tows.

Feb. 8.
Repairs.

Feb. 9.
City to Sandy Point—
Stmr. Potomac.
Returning to city—
Tug Volunteer.
Schr. Mary E. Patten.

Feb. 10.
Repairs.
City to Sandy Point.
Thence through ice gorge—
Stmr. Northumberland.
Returning to city.

ANNAPOLIS.

Feb. 11.
City to Thomas' Point—
Tug Helen.
Returning to Sandy Point.
Thence to Annapolis.

Feb. 12.
Annapolis to North Point—
Tug Hamilton.
Five Oyster Boats.
Assisted Tug Radiant.
2 Barges.
Thence to Sandy Point.
Returning to Quarantine and city—
Stmr. Rowanmore.
Stmr. St. Mary's.

Feb. 13.
City to Cut-off.
Returning to city.

Feb. 14.
City to North Point—
Stmr. Willehad.
Stmr. Georgia.
Stmr. Lexington.
Stmr. Atlanta.
Thence to Sparrow's Pt. Whf.--
Stmr. Jordenskjold.
Thence to Sandy Point.
Returning to city.

F. C. LATROBE.

Feb. 11.
City to Sandy Point.
Returning to North Point—
Tug Buccaneer.
Schr. T. Charlton Henry.
Tug Sarah.
4 Oyster Vessels.
Thence to Sandy Point.
Thence through heavy gorge to city—
Tug Atlantic.
2 Barges.

Feb. 12.
City to Curtis Bay—
Broke track.
Thence to Sandy Point—
S.S. Neckar.
Stmr. Susquehanna.
Returning to North Point—
Tug Sea King.
Schr. Mary F. Barnett.
Thence to Annapolis—
Tug Sarah.
6 Vessels.

Feb. 13.
Annapolis to Fort Carroll—
Stmr. Susquehanna.
Thence down channels—
SS. Vera.
Returning to North Point—
Stmr. Calvert.
Stmr. Westmoreland.
Thence to Sandy Point—
Tug Sea King.
6 Oyster Vessels.
Returning to city.

Feb. 14.
City to Sandy Point.
Returning to Craighill Chan.—
SS. Templemore. Her pilot concluded that weather was too thick to proceed.
Thence to Annapolis—
SS. Templemore.
Stmr. Chas. F. Mayer.
Barge.
Tug Sarah.
3 Oyster Boats.

ANNAPOLIS.

Feb. 15.
City to Sandy Point.
Returning to Magothy—
Stmr. Philadelphia.
Tug Dauntless.
Then to Stmr. New Orleans, ashore near Sandy Point.
Thence to Greenbury Point.

Feb. 16.
Greenbury Point to—
Stmr. New Orleans; pulled her off 5.30 P.M.
Thence to Savannah Wharf.

Feb. 17.
Discharging freight taken from New Orleans.
Thence to Sandy Point.
Returning to city.

Feb. 18.
City to Sandy Point.
Returning to Fort Carroll.

F. C. LATROBE.

Feb. 15.
Annapolis to Seven-Ft. Knoll--
SS. Templemore.
Stmr. Chas. F. Mayer.
Barge.
Tug Curtain.
3 Oyster Boats.
Tug Sarah.
3 Oyster Boats.
Thence to Sandy Point—
U. S. Rev. Cutter Windom
Returning to Seven-Ft. Knoll--
Stmr. Potomac.
Back to Sandy Point.
Thence up channels—
Tug Sea King.
Broke ice jam above Fort Carroll.
Stmr. Philadelphia.
Thence up and down channels.

Feb. 16.
City to Rock Point—
Barge Oak ashore there; floated her.
Thence to Chester River--
In gorge all night.

Feb. 17.
Love Point to Cut-off Chan.—
Stmr. Queen Caroline.
Cut-off to Sandy Point—
SS. Inca.
Returned to city.

Feb. 18.
City to Sandy Point—
SS. Templemore.
Returning to ice jam in Craighill.
Thence to Sandy Point—
SS. Jordenskjold.
Returning to Cut-off Channel.
Thence to Sandy Point—
SS. Urd.
Tug Dauntless.
Returned to city.

ANNAPOLIS.

Feb. 19.
Fort Carroll to Annapolis Rds.
Returning to North Point—
Tug Curtain.
Tug Helen.
6 Oyster Boats.
Thence to city.

Feb. 20.
City to Annapolis Roads.
Returning to North Point—
SS. Durango.
Tug Sarah.
1 Oyster Boat.
Thence to Annapolis.

Feb. 21.
Annapolis to Sandy Point.
Thence to Seven-Ft. Knoll—
Stmr. Georgia.
Returning to city.

Feb. 22.
City to down river—
Tug Cumberland.
2 Barges.
Tug Frostburg.
1 Barge.
Thence to Annapolis.

Feb. 23.
Annapolis to ice fields in Craighill—
Broke ice.
Returning to city.

F. C. LATROBE.

Feb. 19.
City to Annapolis.

Feb. 20.
Annapolis to Sandy Point—
Stmr. Susquehanna.
Ice jam, Sandy Point to city—
SS. Gloucester.

Feb. 21.
City to gorge at Sandy Point—
SS. Templemore.
SS. Runo.
Stmr. Gaston.
Stmr. Chesapeake.
Thence to Annapolis.

Feb. 22.
Annapolis to Craighill—
SS. Essex in gorge.
Thence to North Point—
Stmr. Manhattan.
Returning to Sandy Point.
Thence to Curtis Bay—
Stmr. Frostburg.
Tug Cumberland.
3 Barges.
Then up and down channels.

Feb. 23.
City to Sandy Point—
Stmr. Georgia.
SS. Trojan.
Returning up channels.
Thence to Thomas' Point—
Lightship No. 71.
Returning to Annapolis.

ANNAPOLIS.

Feb. 24.
Coaling.

Feb. 25.
City to off Claiborne.
Thence to Oxford.

Feb. 26.
Oxford to Choptank Light.
Lighthouse Inspector to make examination.
Thence to Cambridge—
Broke out Stmr. Joppa.
Thence to Claiborne.
Returning to city.

Feb. 27.
City to Chestertown—
Stmr. Gratitude.

F. C. LATROBE.

Feb. 24.
Annapolis—
Broke track to railway and wharves.
Thence to North Point—
Stmr. Calvert.
Stmr. Northumberland.
Stmr. St. Mary's.
Stmr. Charlotte.
Stmr. Atlanta.
Then up and down channels—
Tug Sarah.
Schr. Sagamore.

Feb. 25.
City to lower end Craighill.
Returning to city.

Feb. 26.
City to Seven-Foot Knoll.
Returning to Steelton.
Thence to Worten's Point.
Worten's Point to city—
SS. Ericsson.

Feb. 27.
City to Sandy Point—
Stmr. Maryland.
Stmr. Enoch Pratt.
Sandy Point to North Point—
Tug J. S. Hoskins.
Schr. Ed. Briry.
Thence to lower end Craighill--
SS. Durango.
Returning—
Tug Sarah.
4 Oyster Boats.

ANNAPOLIS.

Feb. 28.
Chestertown to Seven-Foot Knoll—
Stmr. Gratitude.
Thence to Sandy Point—
Stmr. Katahdin, ashore helped float her.
Assisted Tug Peerless and Schr. Elizabeth Palmer through ice.
Thence to Annapolis.

F. C. LATROBE.

Feb. 28.
City to Sandy Point—
Stmr. Avalon.
Stmr. St. Mary's.
Stmr. Middlesex.
Stmr. Ida.
Returning to Cut-off—
SS. Marcia.
SS. Wania.
SS. Marie.
SS. Chesapeake.
Tug Dauntless.
Thence to—
Katahdin, ashore at Sandy Point; helped float her.
Thence to Cut-off—
Stmr. Katahdin.
Tug Hamilton.
2 Oyster Boats.
Returning to Sandy Point.
Thence to city—
Tug Peerless.
Schr. Elizabeth Palmer.

Feb. 29.
Annapolis to Bay.
Thence to North Point—
Tug Sandow.
Bark Amy.
Thence to city.

Feb. 29.
City to Sandy Point—
Stmr. Essex.
Returning to city—
Tug Vulcan.
Bark White Wings.

Mar. 1.
City to Sandy Point.
Returning to North Point—
Tug Hoskins.
Tug Curtain.
8 Oyster Boats.
Thence to Annapolis.

Mar. 1.
City to ice jam at Thomas' Pt.
Returning to city—
Stmr. Avalon.
SS. Lily.
Tug Sarah.
3 Oyster Boats.

ANNAPOLIS.

Mar. 2.
Annapolis to SS. Rhein, anchored in Bay.
Thick Fog.
Thence to Cut-off—
SS. Rhein.
Thence to city.

Mar. 3.
City to Seven-Foot Knoll.
Returning to city.

Mar. 10.
City to Potomac River—
Stmr. Calvert ashore; pulled her off.
Returning to city.

F. C. LATROBE.

Mar. 2.
City to Annapolis Roads—
Stmr. Westmoreland.
Stmr. Virginia.
Stmr. Danville.
Returning to Fort Carroll—
Stmr. Enoch Pratt.
Tug Sea King.
Schr. James Pierce.
Tug Albert Ellis.
Schr. Henry T. Hayward.
Thence to Steelton Wharf—
SS. Orion.
Thence to Sandy Point—
SS. Lord Downshire.
Thence to Annapolis.

Mar. 3.
Annapolis to Hackett's Pt.—.
Stmr. Ida.
Thence to Cut-off—
Assisted SS. Gothard to head down (heavy S.W. wind).
Thence to city.

Mar. 10.

DREDGING REPORT.

Dredging for the Season of 1904.

Commenced work on May 14 at Pratt and Light streets and worked on dock work until May 27, and then moved to Spring Gardens and finished the Spring Gardens work June 25.

On June 27 moved to the foot of Webster street, and on June 28 to the foot of Henry street, in front of Reeder's. On June 28 moved to the Bay Line pier and finished this work on the 29th. Moved to the Back Basin on June 29, and finished the work in the Back Basin on July 21. Moved to the foot of Cross street on July 21, and to the foot of Lancaster street on July 23.

On July 23 moved to the Main Channel and finished August 18. On August 19 went to the American Ice Company wharf, on the east side of Henry street, and finished on the 20th. Moved to the foot of Battery avenue on the 21st of August and finished on the 22d. On the 22d of August moved to outside of drawbridge and finished on the 22d.

Finished dock, Back Basin, Spring Gardens and Main Channel on August 22d. Returned to east of Harris' creek November 8 and finished November 15.

Docks:

TO HARD BOTTOM.

At Shriver's corner, covering 2,322⅔ square yards area.

TO HARD BOTTOM.

Between Piers Nos. 2 and 3, length 90 feet and an average width of 55 feet, covering 550 square yards area.

TO HARD BOTTOM.

At Bay Line Pier No. 9, for a length of 120 feet and an average width of 35 feet, covering 466⅔ square yards area.

TO HARD BOTTOM.

At Light and Lee streets, for a length of 150 feet and an average width of 60 feet, covering 1,000 sqnare yards area.

TO HARD BOTTOM.

Along Pratt street towards Bowly's wharf, for a length of 100 feet and a width of 50 feet, covering 555⅝ square yards.

TO HARD BOTTOM.

Along side of Bowly's wharf, for a length of 50 feet and a width of 50 feet, covering 277⅞ square yards.

TO HARD BOTTOM.

At the foot of Battery avenue, for a length of 250 feet and an average width of 35 feet, covering 972⅝ square yards.

TO HARD BOTTOM.

In front of Reeder's wharf, now New York Steamboat Company, for a length of 230 feet and a width of 50 feet, covering 1,277⅞ square yards.

TO HARD BOTTOM.

At the foot of Henry street, for a length of 160 feet and a width of 60 feet, covering 1,066⅔ square yards.

DEPTH NINETEEN FEET.

In front of American Ice Company's Pier, 150 feet in width, with a length of 210 feet, covering 3,500 square yards.

DEPTH NINETEEN FEET.

At the foot of Cross street, for a length of 230 feet and a width of 60 feet, covering 1,533⅓ square yards.

DEPTH TWELVE FEET.

At the foot of Webster street, for a length of 130 feet and a width of 30 feet, covering 433⅓ square yards.

TO HARD BOTTOM.

At upper end of Long dock, for a length of 200 feet and a width of 45 feet, covering 1,000 square yards.

TO HARD BOTTOM.

At lower end of Long dock, for a length of 300 feet and an average width of 40 feet, covering 1,333⅓ square yards.

DEPTH TWELVE FEET.

At the foot of Broadway, for a length of 120 feet and an average width of 30 feet, covering 400 square yards.

DEPTH FIFTEEN FEET.

At the foot of Washington street, for a length of 60 feet and a width of 50 feet, covering 333⅓ square yards.

DEPTH EIGHTEEN FEET.

At the foot of Chester street, for a length of 70 feet and a width of 40 feet, covering 311⅛ square yards.

DEPTH TWELVE FEET.

Alongside of Schall's Pier, for an average length of 197 feet and an average width of 67 feet, covering 1,466⅝ square yards.

DEPTH FIFTEEN FEET.

Outside bulkhead line at Harris' creek, for a length of 330 feet and a width of 100 feet, covering 3,666⅔ square yards.

DEPTH FIFTEEN FEET.

Inside of bulkhead line at Harris' creek, for a length of 180 feet and a width of 80 feet, covering 1,600 square yards.

DEPTH FIFTEEN FEET.

In front of bulkhead on east side Harris' creek, for a length of 50 feet and a width of 50 feet, covering 277⅞ square yards.

DEPTH TEN FEET.

In front of Chipman's wharf, for an average length of 155 feet and an average width of 75 feet, covering 1,291⅔ square yards.

DEPTH TWELVE FEET.

At the foot of Canton street, for a length of 200 feet and a width of 100 feet, covering 2,222⅔ square yards.

Channels:

DEPTH THIRTY FEET.

Main Channel in harbor, from Piers Nos. 23 and 24, lower side to 400 feet above Baltimore and Ohio's new pier Locust Point, for a length of 2,200 feet and a width of 300 feet, covering 73,333⅓ square yards.

Jones' Falls and Back Basin:

DEPTH EIGHTEEN FEET.

From Canton avenue bridge to basin, 50 feet wide for a length of 1,053 feet, covering 5,850 square yards.

DEPTH FIFTEEN FEET.

North side basin, cuts 100 feet wide, for an average length of 1,162 feet, covering 12,764 square yards.

DEPTH FIFTEEN FEET.

South side basin, cut 50 feet wide, for a length of 380 feet, covering 2 111 square yards.

DEPTH FOURTEEN FEET.

South dock, cut 40 feet wide, for a length of 600 feet, covering 2,660 square yards.

DEPTH FOURTEEN FEET.

North dock, cut 45 feet wide, for a length of 615 feet, covering 3,075 square yards.

DEPTH FIFTEEN FEET.

Through east side of Draw bridge, cut 47 feet wide, for a length of 350 feet, covering 1,828 square yards.

DEPTH FIFTEEN FEET.

Through west side of drawbridge, cut 40 feet wide, for a length of 265 feet, covering 1,178 square yards.

Spring Gardens:

DEPTH SIXTEEN FEET.

Bush street channel, 2 cuts 50 feet each in width, for a length of 1,040 feet, covering 11,555⅝ square yards.

DEPTH SIXTEEN FEET.

Bush street dock, 1 cut 50 feet in width, for a length of 1,400 feet, covering 7777⅞ square yards.

DEPTH TWELVE FEET.

Main Channel, 1 cut 50 feet in width, for a length of 2,150 feet, covering 11,944½ square yards.

Total number of square yards for docks is 27,858⅜, and total for Back Basin is 29,466 square yards.

Total for Middle Branch is 31,277⅞ square yards.

Total for Ship Channel is 73,333⅓ square yards.

TOTAL DREDGING.

Back Basin and Docks	71,919	Cubic yards.
Middle Branch	50,735	" "
Ship Channels	98,063	" "
	220,717	" "

ALEX. WILKINSON,
Superintendent Dredging.

ANNUAL REPORT

—OF THE—

Commissioner of Street Cleaning

—TO THE—

MAYOR AND CITY COUNCIL OF BALTIMORE

—FOR THE—

FISCAL YEAR ENDING DECEMBER 31, 1904.

BALTIMORE, MD.
WM. J. C. DULANY COMPANY,
CITY PRINTER.

1905.

OFFICERS AND EMPLOYEES

— OF THE —

Street Cleaning Department

FOR THE YEAR 1904.

JOSEPH L. WICKES,
Commissioner of Street Cleaning.

WILLIAM A. LARKINS,
General Superintendent.

FREDERICK G. WHELAN,
Chief Clerk.

HARRY MOALE,
Assistant Clerk.

F. W. HOFFROGGE,
Stenographer and Mileage Clerk.

District Superintendents:
WILLIAM WIEBKING, First District.
EDWARD F. CALLAHAN, Second District.
JESSE F. HALL, Third District.
JOHN T. BRADY, Fourth District.
JOHN E. GIST, Fifth District.
MICHAEL DOONAN, Sixth District.
B. T. SARBER, Seventh District.
W. A. PEDDICORD,
Superintendent of Machine Sweeping.

A. S. WILSON,
Garbage Inspector.

HUGH NOON,
Assistant Garbage Inspector.

JOSEPH W. FUNK,
Assistant Garbage Inspector.

REPORT.

BALTIMORE, MD., January 1, 1905.

To the Honorable the Mayor and City Council of Baltimore:

GENTLEMEN—I have the honor of submitting my second annual report, covering the most noteworthy period in the history of this department. The fiscal year started with a winter of unprecedented severity, both in regard to temperature and snow—of the two, the former is to be most dreaded in this unsewered city.

Should an object lesson be needed of the necessity of this great improvement, the winter of 1903 and 1904 certainly furnished it. All the water used for domestic and manufacturing purposes is turned into the streets, and in freezing weather, before it gets far from the outlet, it becomes a solid mass of ice. Where large quantities of water are used, as in the case of church organ motors, cellar drains and beer pumps, in many cases we had ice from four to five feet thick, and the work done one day had to be repeated the next. Statistics show the consumption of water is much larger in winter than in summer, for the reason that many people run their hydrants all the time to keep them from freezing, All this waste water is turned into our public streets and alleys, promptly freezes, and makes many of them practically impassable for all vehicles.

This condition lasted for 100 days of the year 1904, costing this department $60,000. Capitalize $60,000 at three per cent. and you have $2,000,000, which would be a big help in the construction of a sewerage system. While this absolutely necessary work was in progress, our streets and alleys suffered correspondingly.

On February 7 occurred the largest and most destructive fire in the history of Baltimore, which greatly affected the workings of this Department. On the night of the 7th I assembled a force of men at the City Hall, under Superintendent Callahan, and provided them with buckets to patrol the roof and tower, and to see that all windows were kept securely closed. These men extinguished the falling sparks, and remained on duty until all danger to the City Hall was past. On the morning of the 8th the entire force was assembled at the City Hall, and their services offered to the Fire Department to relieve the firemen. The Fire Department availed themselves of this offer, and the men were detailed to various parts of the Burnt District and handled the hose while the firemen took a much needed rest. This was repeated on the 9th, and on the 10th the entire force was put in the Burnt District to clear the streets. Our force was supplemented by a large force sent by the Pennsylvania Railroad, for which I desire to take this opportunity to publicly express the thanks of this Department. A large force was taken on by the City Engineer, B. T. Fendall, which worked in conjunction with this Department, and in a few days all the principal streets in the burnt district were open for traffic. The first practical problem to be met was the removal of debris, of which it was estimated there were one million cubic yards. After several conferences with the committee, appointed by His Honor Mayor McLane, and with Vice-President Potter and Superintendent Galloway of the Baltimore and Ohio Railroad, and with President Hood and General Manager House of the United Railway, it was decided to have the Baltimore and Ohio Railroad lay a double track on Pratt street, from Charles street to the bridge, to lay spur tracks on Gay street, Cheapside and Calvert street, from Pratt street north, and to erect suitable platforms for the dumping of debris from carts into cars, to be hauled away by the Baltimore and Ohio Railroad and finally disposed of. In this way ample facilities were given to all property-holders in the Burnt District to

dispose of their debris rapidly and economically. Tickets were sold at twenty cents apiece, good for a cart load not exceeding one cubic yard, of which fifteen cents per cubic yard was paid to the Baltimore and Ohio Railroad and five cents retained to pay for the erection of platforms and their operation, the idea being simply to cover expenses for both the railroad and the city. The first platform was opened for business March 11 and the last one closed July 27, thus affording ample opportunity for all who desired to avail themselves of their use.

The service furnished by the Baltimore and Ohio Railroad was generally most excellent, due to the untiring efforts of Superintendent Galloway and Trainmaster Gaither, who gave this service close personal attention, and I desire to take this opportunity, on behalf of this Department, to thank both of these gentlemen, and also Vice-President Potter, for their interest and invaluable aid in this work.

Street Cleaning Division.

The contract system for machine sweeping was found during the past year to be most unsatisfactory, and after careful consideration it was decided to abolish the contract system, and perform this important work by men employed by this Department and carried on our rolls: the machines to be drawn by good able bodied horses, and the custody of the valuable equipment necessary for this work to be kept at all times in the possession of this Department. The quality and quantity of the work, and the condition of the equipment have all shown that the change was for the better in every particular.

On account of the removal of debries, and the large building operations in the Burnt District, it was necessary to do considerable sprinkling to reduce the dust nuisance as much as possible. Arrangements were made with the United Railway to do extra sprinkling, and five sprinkling wagons were put into day service to sprinkle the principal streets in the Burnt District, and also the streets in the vicinity, which was a great relief to the many people whose business called them to this neighborhood.

After the removal of the debris platforms it was found necessary to remove the immense quantities of dirt from our streets in some other way than hauling to the long dumps. To accomplish this, a contract was entered into with Mr. Michael T. Horner, to remove by scow and finally dispose of all this class of material. By this means at least thirty carts, at an aggregate cost of $30,000 per annum, were saved the city.

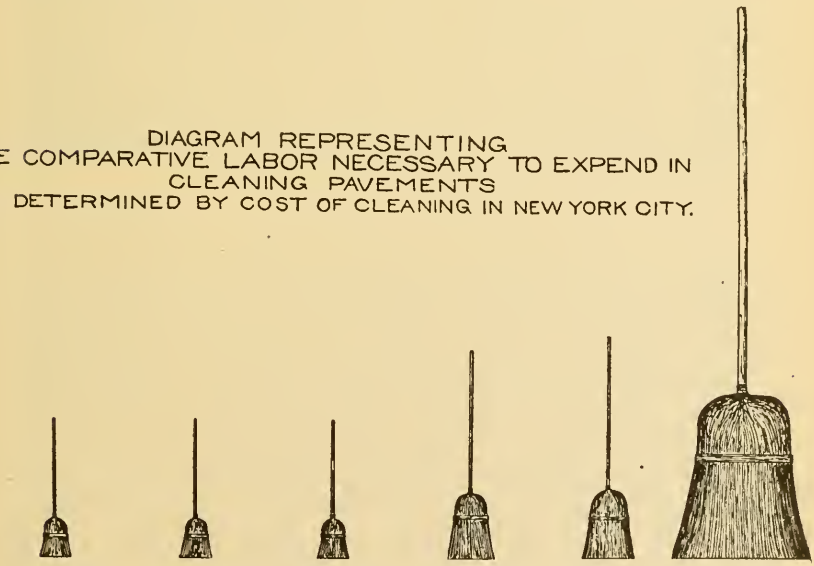
A dark grey uniform was adopted for the inspectors, superintendents and foremen of this Department, similar to that of New York city.

At the close of last winter the city was in a deplorable condition, due to the long fight we had simply to keep the streets safe. The alleys for the most part were impassable for weeks at a time, and when the winter finally broke, there were thousands of cart loads of filth to be moved from them. As an example of the quantity that had to be taken away, I will cite one block of Dolly Varden alley out of which 200 loads were removed. The streets also were in a very bad condition with the long accumulation of dirt that had to be carted away and disposed of. It was the early part of May before the city was finally gotten in a safe and sanitary condition. While the city afforded amply facilities to enable the fire sufferers to dispose of their debris within the Burnt District, many failed to avail themselves of this, and hauled to the long dumps on the outskirts of the city, with leaky and broken down vehicles of all descriptions, with the result that many of our most important thoroughfares were constantly littered with sand, old mortar, broken bricks, etc.

The Department has been much annoyed by storekeepers and careless pedestrians making a public dumping ground of the business streets. These streets are generally cleaned at night, and all day long are made a receptacle for store sweepings, packing material of all kinds, waste paper and fruit parings, notwithstanding the fact that all this is prohibited by law.

In the nature of an experiment and with a view of lessening this practice, receptacles will be provided at important street intersections, in the hope that in this way this Department may obtain the co-operation of the general public in keeping the streets in a sightly condition at all times. Most of our large cities have a great deal more smooth pavement than cobblestone, and from 200 to 250 per cent. more per capita to keep them clean; in Baltimore we have 60.6 miles of smooth pavement, including 43.1 miles of Belgian block and 264.4 miles of cobble streets, forty-eight miles of macadam, and 47.7 miles unpaved. This does not include public or private alleys or private streets, of which they are a large number in the city. Experiment has accurately demonstrated that the cost of cleaning cobble pavement is four times greater than cleaning asphalt, brick or wooded block, as the diagram reproduced from the "Municipal Journal and Engineer" will illustrate.

DIAGRAM REPRESENTING
THE COMPARATIVE LABOR NECESSARY TO EXPEND IN
CLEANING PAVEMENTS
AS DETERMINED BY COST OF CLEANING IN NEW YORK CITY.



An unexpected and heavy burden was placed on this Department, by an opinion of the City Solicitor, making us responsible for the sidewalks and gutters of streets bordering on all properties under the control of the Park Board. This work has heretofore always been done by Park employees, and the extent of it will be appreciated from the fact, that to properly do this work, costs $400 for an average snow storm. It is needless to say that no extra money, was given this Department for this purpose. The Park Board have a surplus of $30,000 for the year 1904.

It is a cause of much comment by visitors and even by our own citizens who are accustomed to it, the reckless way in which our streets are constantly torn and dug up. Every opening in a street increases the difficulty in cleaning, and adds to the unsightly appearance for blocks around, as vehicles and pedestrians carry the loose mud and sand in all directions. This nuisance could be very much reduced, by such companies who use the beds of our streets keeping in close touch with the proper municipal authorities, and keeping informed of the plans of the others. By this means the same trench could be often used by two or more companies, thus reducing the cost of work, and greatly lessening this nuisance.

Sanitary Division.

The severe winter of 1903 and 1904 made it physically impossible to give citizens the service they were entitled to and had a right to expect. Most of the alleys, especially the the private alleys, were for months impassable for the garbage and ash carts. In all cases of this kind, the residents were requested to place their garbage and ashes at the front of their residences, where it could be collected. In most cases this request was cheerfully complied with, though many refused to do it. When the alleys became passable many extra carts were put on to remove the winter's accummulation, which was not all removed until the latter part of April.

Several times during the winter the Sanitary Company placed a large number of their extra carts at the disposal of this Department, amounting in money to $966, and refusing to make any charge therefore, for which I desire to publicly express the appreciation of this Department for this courtesy.

The improvement in this service is marked, and after a careful investigation of the cost and efficiency of this service in a number of other cities, it is my firm belief that we have the cheapest and best sanitary service in the United States. A table showing by months the complaints received at this office in 1904 may be of interest, and is shown herewith:

Months.	Justifiable.	Not Justifiable.
January	59	133
February	15	118
March	16	120
April	1	30
May		47
June	3	42
July	3	34
August	7	27
September	4	24
October	1	26
November		70
December	10	105
Total	109	776

For some unknown reason most of the records of 1903 for this service are missing, and it is, therefore, only possible to make a partial comparison. The record as shown in the table below for the year 1903 are all that we are able to find. The figures set opposite to the year 1904 are for the corresponding dates of the year 1903, and it is fair to assume that the improvement shown in this service on these dates between 1903 and 1904, would show pretty much the same for the whole year if the complete records of the year 1903 were available:

COMPLAINTS RECEIVED.

	1903.	1904.
February 14 to 28 inclusive	141	82
March 1 to 31 inclusive	169	136
April 1 to 24 inclusive	146	24
May 19 to 29 inclusive	351	26
Complaints for 24 days from June 1 to 30 inclusive	328	41
Complaints for 14 days from July 1 to 22 inclusive	175	24
Total	1,310	333

The Commissioner has made inspection from time to time of both the reduction plant and other equipment of the Company, and has found every part of their equipment maintained in a high state of efficiency.

The same liberal spirit that was manifested in furnishing the carts to help us out of a tight place, has characterized all the dealings of the Baltimore Sanitary Contracting Company with this Department. There has been no hair-splitting on their part regarding their duty as set forth in the specifications of their contract, but they have faithfully supported my efforts to give the people of Baltimore a clean and healthy city.

In closing I consider it proper to commend the untiring efforts of General Superintendent William A. Larkins, the district superintendents and foreman; without their loyal and faithful support little could have been done.

Respectfully submitted,

J. L. WICKES,
Commissioner of Street Cleaning.

REPORT OF CONTRACTS IN FORCE IN THE STREET CLEANING DEPARTMENT DECEMBER 31, 1904.

CONTRACTOR.	For.	Time.	Amount.	Expires.
Baltimore Sanitary Contracting Company	Removal of garbage and refuse	From Oct. 20, 1902, for 10 years	$147,300 per year	October 20, 1912
Baltimore Sanitary Contracting Company	Additional removal of refuse	From Jan. 1, 1905, to Oct. 20, 1912	51,500 for 1905	October 20, 1912
Baltimore Sanitary Contracting Company	Additional removal of refuse		3,000 each year additional	October 20, 1912
Baltimore Sanitary Contracting Company	Furnishing teams for sprinklers and sweepers and storage for same	One year from June 1, 1904	$2.98 per team	June 1, 1905.
Fred. Beck & Co	Furnishing machine brooms for sweepers	One year from Aug. 8, 1904	$14 per broom	August 8, 1905.
Fred. Beck & Co	Furnishing hand brooms for street sweeping	Two years from June 1, 1903	$3.40 per doz.	June 1, 1905.
M. J. Horner & Co	Removal of street dirt by scows	From Aug. 8 for one year	18¾c. cu. yard	August 8, 1905.

SUMMARY.

AMOUNT OF WORK DONE BY THE VARIOUS DISTRICTS AND SHOWING THE COST OF SAME.

DISTRICT.	Miles.	Great Squares	Cost per Square.	Total Cost.	Cubic Yards, Snow and Ice.	Cost per Cubic Yard	Total Cost.	Grand Total Cost.
First District	1,481.52	31,290	$.554	$17,341 72	37,482	$.214	$8,005 54	$25,347 26
Second District	2,105.36	44,465	.443	19,681 07	36,405	.235	8,551 84	28,232 91
Third District	1,224.19	25,855	.490	12,667 49	23,004	.233	5,353 67	18,021 16
Fourth District	2,442.12	51,578	.403	20,738 26	35,076	.263	9,229 29	29,967 55
Fifth District	1,655.63	34,961	.592	20,702 64	37,465.5	.231	8,666 28	29,368 92
Sixth District	2,801.78	59,178	.551	32,587 81	58.269	.226	13,186 92	45,774 73
Seventh District	1,677 58	35,430	.589	20,886 74	52,447 5	.16	8,405 75	29,292 49
	13,388.18	282,757	$.511	$144,605 73	280,149	$.218	$61,399 29	$206,005 02

NOTE.—The cost of this work includes the alleys in the various districts, but not the area, as we have been unable to obtain the square feet contained therein. It is estimated that, could this be gotten at accurately, it would reduce the cost per great square about one-third.

First District.

The First District comprises all of the territory bounded by Baltimore street to water front, and from Broadway to eastern city line.

Route.	No. Times Cleaned.	Miles in Route.	Total Mileage.
No. 1	31	3.89	120.59
No. 2	33	3.25	107.25
No. 3	22	4.25	93.50
No. 4	22	3.97	87.34
No. 5	29	4.50	128.50
No. 6	32	2.67	85.44
No. 6½	10	1.73	17.30
No. 7	19	4.02	76.38
No. 8	18	4.02	72.36
		Total,	788.66
Total mileage of smooth pavements cleaned,			535.94
Total mileage of markets cleaned,			156.92
		Grand total,	1,481.52

The routes of the First District are bounded as follows:

No. 1, Monument street to Baltimore street; Central avenue to Broadway.

No. 2, Baltimore street to Canton avenue; Central avenue to Broadway.

No. 3, Monument street to Fayette street; Broadway to Milton avenue.

No. 4, Fayette street to Lombard street; Broadway to Lakewood avenue.

No. 5, Lombard street to Canton avenue; Broadway to Patterson Park avenue.

No. 6, Canton avenue to water front; Bond street to Chester street.

No. 6½, Canton avenue to water front; Bond street to Central avenue.

No. 7, Chester street to Chesapeake street; Eastern avenue to Boston street.

No. 8, Chesapeake street to East avenue; Fait avenue to Boston street.

Second District.

The Second District comprises all of the territory bounded by North avenue to Monument street, and from Cathedral street to eastern city line.

Routes.	No. Times Cleaned.	Miles in Route.	Total Mileage.
No. 1	36	4.77	171.72
No. 2	29	3.90	113.10
No. 3	22	4.11	90.42
No. 4	21	4.84	101.64
No. 5	22	4.41	97.02
No. 6	19	5.68	107.92
No. 7	26	4.88	126.88
No. 8	22	4.68	102.96
No. 9	21	4.58	96.18
		Total,	1007.84
Total mileage of smooth pavements cleaned,			1036.68
Total mileage of markets cleaned,			60.84
		Grand total,	2105.36

The routes of the Second District are bounded as follows:

No. 1, Monument street to Preston street; Greenmount avenue to Cathedral street.

No. 2, Preston street to North avenue; Greenmount avenue to Falls road.

No. 3, Monument street to Hoffman street; Greenmount avenue to Aisquith street.

No. 4, Ensor street to Caroline street; Preston street to North avenue.

No. 5, Monument street to Preston street; Aisquith street to Caroline street.

No. 6, Monument street to North avenue; Caroline street to Broadway.

No. 7, Monument street to Chase street; Broadway to Patterson Park avenue.

No. 8, Chase street, Gay street and Milton avenue boundaries.

No. 9, Broadway, North avenue and Gay street boundaries.

Third District.

The Third District comprises all of the territory bounded by North avenue to northern city line, and from the eastern to the western city line.

Route.	No. Times Cleaned.	Miles in Route.	Total Mileage.
No. 1	15	1.01	15.15
No. 2	35	2.69	94.15
No. 3	16	2.38	38.08
No. 4	8	.61	4.88
No. 6	29	3.67	106.43
No. 7	40	5.02	200.80
No. 8	30	2.63	78.90
No. 9	36	4.27	153.72
Burnt District	9	3.00	27.00
		Total,	719.11
Total mileage of smooth pavements cleaned,			505.08
		Grand total,	1224.19

The routes of the Third District are bounded as follows:

No. 1, Cedar avenue, First avenue, Chestnut avenue, etc., (Hampden.)

No. 2, North avenue, from Payson street to York road.

No. 3, North avenue, from York road to Belair road; Belair road, from North avenue to Baltimore and Ohio Railroad bridge; North avenue to Twenty-second street; York road to Harford avenue.

No. 4, North avenue, from Payson street to Tenth street (Walbrook); North avenue to Clifton street; Payson street to Smallwood street.

No. 6, North avenue to Twenty-fifth street; St. Paul street to Boone street.

No. 7, North avenue to Twenty-ninth street; St. Paul street to Jefferson Place.

No. 8, Eutaw Place to Mt. Royal Terrace; North avenue to Druid Hill Park.

No. 9. Eutaw Place to Fulton avenue; North avenue to Orem's lane.

Fourth District.

The Fourth District comprises all of the territory bounded by North avenue to Lafayette avenue, to Pennsylvania avenue, to Franklin street, to Howard street, to Monument street, and from Mt. Royal avenue and Cathedral street to western city line.

Route.	No. Times Cleaned.	Miles in Route.	Total Mileage.
No. 1	35	4.25	148.75
No. 2	36	3.75	135.00
No. 3	22	5.37	118.14
No. 4	23	5.28	121.44
No. 5	37	5.49	203.13
No. 6	27	4.27	115.29
No. 8	38	5.16	196.08
		Total,	1037.83
Total mileage of smooth pavements cleaned,			1255.45
Total mileage of markets cleaned,			148.84
		Grand total,	2442.12

The routes of the Fourth District are Bounded as follows:

No. 1, Franklin street to Biddle street; Pennsylvania avenue to Cathedral street.

No. 2, Biddle street to Dolphin street; Pennsylvania avenue to Maryland avenue.

No. 3, Dolphin street to Wilson street; Pennsylvania avenue to Mt. Royal avenue.

No. 4, Wilson street to North avenue; Pennsylvania avenue to John street.

No. 5, Lafayette avenue to Patterson avenue; Pennsylvania avenue to Monroe street.

No. 6, Patterson avenue to North avenue; Pennsylvania avenue to Monroe street.

No. 8, Pennsylvania avenue, Madison avenue, Linden avenue, Cathedral street, etc.

Fifth District.

The Fifth District comprises all of the territory bounded by Lafayette avenue, Pennsylvania avenue, Franklin street, to Pratt street, and from Eutaw street to western city line.

Route.	No. Times Cleaned.	Miles in Route.	Total Mileage.
No. 1	72	4.13	297.36
No. 2	20	5.73	114.60
No. 3	19	5.18	98.42
No. 4	8	3.87	30.96
No. 5	8	4.89	39.12
No. 6	20	4.32	86.40
No. 7	16	4.76	76.16
No. 8	32	4.12	131.84
No. 9	19	4.42	83.98
		Total,	958.84
Total mileage of smooth pavements cleaned,			398.31
Total mileage of markets cleaned.			298.48
		Grand total,	1655.63

The routes of the Fifth District are bounded as follows:

No. 1, Franklin street to Pratt street; Howard street to Pearl street.

No. 2, Greene street to Schroeder street; Saratoga street to Pratt street.

No. 3, Schroeder street to Fulton avenue; Lexington street to Pratt street.

No. 4, Baltimore street to Pratt street; Fulton avenue to Bentalou street.

No. 5, Baltimore street to Lafayette avenue; Fulton avenue to Philadelphia, Wilmington and Baltimore Railroad, and streets in Calverton.

No. 6, Franklin street to Lexington street; Fremont avenue to Fulton avenue.

No. 7, Lafayette avenue to Saratoga street; Pennsylvania avenue to Fremont street.

No. 8, Baltimore street, Fulton avenue, Frederick avenue, Poppleton street, etc.

No. 9, Lafayette avenue to Franklin street; Fremont avenue to Fulton avenue.

Sixth District.

The sixth district comprises all of the territory bounded by Monument street to water front, and from Central avenue to Howard street.

Route.	No. Times Cleaned.	Miles in Route.	Total Mileage.
No. 1	66	4.32	285.12
No. 2	72	2.15	154.80
No. 3	46	3.85	177.10
No. 4	72	2.09	150.48
No. 5	72	7.43	534.96
No. 6	38	6 49	246.62
No. 7	77	8.29	638.33
No. 8	31	7.52	233 12
		Total,	2420.53
Total mileage of smooth pavements cleaned,			338 67
Total mileage of markets cleaned,			. 42.28
		Grand total,	2801.78

The routes of the Sixth District are bounded as follows:

No. 1, Baltimore street to Canton avenue; Central avenue to Jones Falls.

No. 2, Front street to Monument street; Front street to Gay street.

No. 3, Baltimore street to Monument street; Central avenue to Front and Gay streets.

No. 4, Baltimore street to Franklin street; Calvert street to Front street.

No. 5, Baltimore street to Pratt street; Howard street to Frederick street, etc.

No. 6, Pratt street to water front; East Falls avenue to Light street.

No. 7, Baltimore street to Monument street; Howard street to Calvert street.

No. 8, Baltimore street to Saratoga street; Howard street to Charles street, etc.

Seventh District.

The Seventh District comprises all of the territory bounded by Pratt street to southern city line, and from the water front to western city line.

Route.	No. Times Cleaned.	Miles in Route.	Total Mileage.
No. 1	7	2.22	15.54
No. 2	18	5.90	106.20
No. 3	35	7.10	248.50
No. 4	34	5.96	202.64
No 5	33	3.12	102.96
No 6	37	5 96	220.52
No. 7	35	6.16	215.60
No. 8	17	6.00	102.00
No. 9	141	1.26	177.66
No. 10	36	3.84	138.24
		Total,	1529.86
Total mileage of smooth pavements cleaned,			42 28
Total mileage of markets cleaned,			105 44
		Grand total,	1677.58

The routes of the Seventh District are bounded as follows:

No. 1, Fort avenue, from Lawrence street to the Fort gate, and all the other streets on Locust Point that are paved.

No. 2, York street to Randall street; Light street to Covington street.

No. 3, Lee street to Donaldson street; Light street to Hanover street.

No. 4, Pratt street to Ostend street; Hanover street to Warner street.

No. 5, Light street to Paca street; Pratt street to Lee street.

No. 6, Pratt street to Columbia avenue; Howard street to Bush street.

No. 7, Eutaw and Warner streets to Columbia avenue; Camden street to Baltimore and Ohio Railroad.

No. 8, Carey street to Smallwood street; Pratt street to railroad tracks.

No. 9, Light street, from Pratt street to Lee street; Charles street, from Pratt street to Barre street; Camden street, from Eutaw street to Light street; Pratt street, from Charles street to Howard street; Sharp street, from Pratt street to Camden street; Hanover street, from Pratt street to Camden street.

No. 10, Light street, from Lee street to Donaldson street; Charles street, from Lee street to Donaldson street; Hanover street, from Lee street to Donaldson street; Montgomery street, from Charles street to William street; Warren avenue, from Light street to Riverside avenue.

TABLES.

TABLE A.

MONTHLY REPORT OF WORK DONE IN THE STREET CLEANING MOVED, NUMBER MEN EMPLOYED, NUMBER OF STREET CARTS EXPENDED FOR TOOLS AND INCIDENTALS FROM JANUARY 1,

MONTH ENDING.	DISTRICT NO 1 SUPERINTENDENT.	Total No. Loads of Garbage Collected and Removed.	Total No. Loads of Ashes Collecting and Removed.	Total No. Loads of Street Dirt, Sand, Snow, etc. Collected and Removed.
Jan. 31.. .. .	Wm. Weibking.....	257	2,814	9,771
Feb. 29.	" "	179	2,303	3,689
March 31.....	" "	265	2,639	9,448
April 30.....	" "	331	2,485	4,534
May 31.....	" "	428	2,172	2 605
June 30.....	" "	563	1,265	2,091
July 31	" "	940	1,362	2,407
Aug. 31.....	" "	1,134	1.170	1,860
Sept. 30.....	" "	1,061	1,392	1,846
Oct. 31.....	" "	1,912	2,110	2,144
Nov. 30.....	" "	755	2,349	1,543
Dec. 31.	" "	476	3,626	3,844
Total for year 1st District.....		8,301	25,687	45,782

TABLE A.

DEPARTMENT, SHOWING NUMBER LOADS COLLECTED AND RE-EMPLOYED IN EACH SEPARATE DISTRICT; ALSO THE AMOUNT 1904, TO DECEMBER 31, 1904.

Cost of Collecting and Removing Street Dirt, Sand, Snow, etc.	Amount Expended. for Sweeping Machines, Sprinklers and Repairs	Amount Expended for Tools, etc.	No. of Street Carts and Men Employed.	No. of Sweepers and Scrapers Employed.	Total No. of Loads of all Kinds Removed.	Total Amount Expended
$2,689 44	.....	$41 47	17	35	12,842	$ 2,730 91
1,603 70	.....	22 55	10	22	6,171	1,626 25
2,630 40	$ 38 17	45 44	33	37	12,352	2,714 01
2,259 62	136 27	35 40	28	26	7,350	2,431 29
2,148 82	209 78	30 19	16	27	5,205	2,388 79
1,674 66	379 74	24 79	11	22	3,919	2,079 19
2,056 77	357 13	17 00	11	22	4,709	2,430 90
1,477 98	421 59	17 60	11	22	4,164	1,917 17
1,618 50	358 04	26 95	11	22	4,299	2,003 49
1,940 28	426 26	23 92	11	22	6,166	2,390 46
1,466 80	444 72	30 80	12	22	4,647	1,942 32
1,623 78	304 64	31 00	11	22	7,946	1,959 42
$23,190 75	$3,076 34	$347 11	.....	.....	79,770	$26,614 20

TABLE A—Continued.

Monthly Statement of Work Done in the Street Cleaning Department,

Month Ending.	District No. 2. Superintendent.	Total No. Loads of Garbage Collected and Removed.	Total No. Loads of Ashes Collected and Removed.	Total No. Loads of Street Dirt, Sand, Snow, etc., Collected and Removed.
Jan. 31.....	Ed. F. Callahan.....	254	2,814	8,485
Feb. 29.....	" "	179	2,321	4,002
Mar. 31.....	" "	266	2,633	7,783
April 30.....	" "	331	2,485	3,059
May 31.....	" "	428	2,172	2,329
June 30	" "	563	1,265	1,674
July 31.....	" "	940	1,434	2,196
Aug. 31.....	" "	1,134	1,170	1,577
Sept. 30.....	" "	1,064	1,392	1,781
Oct. 31.....	" "	1,912	2,110	2,303
Nov. 30.....	" "	755	2,348	1,752
Dec. 31.....	" "	500	3,630	6,434
Total for year 2d District.....		8,326	25,774	43,375

TABLE A—Continued.

with the Cost of Same, in Each Separate District for the Year 1904.

Cost of Collecting and Removing Street Dirt, Sand, Snow, etc.	Amount Expended for Sweeping Machines, Sprinklers and Repairs.	Amount Expended for Tools, etc.	No. of Street Carts and Men Employed.	No. of Sweepers and Scrapers Employed.	Total No. of Loads of all Kinds Removed.	Total Amount Expended.
$3,036 50	.....	$ 41 47	11	26	11,553	$3,077 97
1,747 25	.....	22 55	11	26	6,502	1,769 80
2,557 09	$33 02	47 44	22	43	10,682	2,637 55
2,464 82	126 88	35 40	22	41	5,875	2,627 10
2,396 15	208 55	31 19	13	28	4,929	2,635 89
1,969 99	379 74	27 79	13	28	3,502	2,377 52
2,386 54	357 13	20 00	11	26	4,570	2,763 67
1,775 60	421 59	19 60	11	26	3 881	2,216 79
1,970 97	358 04	28 70	13	28	4,237	2,357 71
2,370 66	426 21	21 92	13	28	6,325	2,818 79
1,758 47	444 71	33 80	13	28	4,855	2,236 98
1,833 75	304 64	30 50	13	28	10,564	2.168 89
$26 267 79	$3,060 51	$360 36	.....	.....	77,475	$29,688 66

TABLE A—Continued.

Monthly Statement of Work Done in the Street Cleaning Department,

Month Ending.	District No. 3. Superintendent.	Total No. Loads of Garbage Collected and Removed.	Total No. Loads of Ashes Collected and Removed.	Total No. Loads of Street Dirt, Sand, Snow, etc., Collected and Removed.
Jan. 31.....	Jesse F. Hall.....	256	2,808	3,923
Feb. 29.....	" "	179	2,321	1,904
Mar. 31.....	" "	266	2,633	4,503
April 30.....	" "	331	2,485	1,766
May 31	" "	428	2,172	1,571
June 30.....	" "	563	1,265	1,153
July 31.....	" "	940	1,434	1,352
Aug. 31.....	" "	1,134	1,170	1,161
Sept. 30.....	" "	1,064	1,392	1,190
Oct. 31.....	" "	1,912	2,110	1,376
Nov. 30.....	" "	754	2,350	1,056
Dec. 31.....	" "	473	3,518	2,418
Total for year 3d District.....		8,300	25,658	23,373

TABLE A—Continued.

with the Cost of Same, in Each Separate District for the Year 1904.

Cost of Collecting and Removing Street Dirt, Sand, Snow, etc.	Amount Expended for Sweeping Machines, Sprinklers and Repairs.	Amount Expended for Tools, etc.	No. of Street Carts and Men Employed.	No. of Sweepers and Scrapers Employed.	Total No. of Loads of all Kinds Removed.	Total Amount Expended.
$1,619 80	.....	$ 38 47	8	17	6,987	$1,658 27
1,211 71	.....	19 54	8	17	4,404	1,231 25
1,722 16	$ 13 31	46 94	13	29	7,402	1,782 41
1,432 09	31 89	32 40	8	17	4,582	1,496 38
1,595 83	117 77	30 19	8	17	4,171	1,743 79
1,264 00	379 74	29 29	8	17	2 981	1,673 03
1,471 76	357 13	17 00	8	17	3,726	1,845 89
1,103 58	421 59	17 60	8	17	3,465	1,542 77
1,187 33	358 04	31 45	8	17	3,646	1,576 82
1,433 94	391 20	21 92	8	17	5,398	1,847 06
1,134 23	343 56	24 83	8	17	4,160	1,502 62
1,197 76	302 74	32 00	8	17	6,409	1,532 50
$16,374 19	$2,716 97	$341 63	.....	.....	57,331	$19,432 79

TABLE A—Continued.

Monthly Statement of Work Done in the Street Cleaning Department,

Month Ending.	District No. 4. Superintendent.	Total No. Loads of Garbage Collected and Removed.	Total No. Loads of Ashes Collected and Removed.	Total No. Loads of Street Dirt, Sand, Snow, etc., Collected and Removed.
Jan. 31.....	John T. Brady.....	256	2,814	8,588
Feb. 29.....	" "	179	2,321	3,593
Mar. 31.....	" "	266	2,635	7,203
April 30.....	" "	331	2,485	3,525
May 31.....	" "	428	2,172	2,506
June 30	" "	563	1,265	2,021
July 31.....	" "	940	1,435	2,305
Aug. 31.....	" "	1,134	1,170	1,707
Sept. 30.....	" "	1,064	1,392	1,914
Oct. 31.....	" "	1,598	2,424	2,452
Nov. 30.....	" "	755	2,349	1,723
Dec. 31.....	" "	492	3,727	5,996
Total for year 4th District.....		8,006	26,189	43,533

Table A—Continued.

With the Cost of Same, in each Separate District for the Year 1904.

Cost of Collecting and Removing Street Dirt, Sand, Snow, etc.	Amount Expended for Sweeping Machines, Sprinklers and Repairs.	Amount Expended for Tools, etc.	No. of Street Carts and Men Employed.	No. of Sweepers and Scrapers Employed.	Total No. of Loads of all Kinds Removed.	Total Amount Expended.
$3,208 75	.....	$43 47	19	42	11,658	$ 3,252 22
1,924 95	.....	19 54	13	26	6,093	1,944 49
2,725 59	$ 56 51	47 44	28	37	10,104	2,829 54
2,593 47	177 76	32 40	28	36	6,341	2,803 63
2,531 01	229 63	35 19	13	26	5,106	2,795 83
2 084 99	379 74	30 79	14	28	3,849	2,495 52
2,486 43	357 13	22 00	14	28	4,680	2,865 56
1,923 86	421 59	23 60	14	29	4,011	2 369 05
2,100 47	358 04	31 95	14	27	4,370	2,490 46
2,548 46	442 99	27 92	14	27	6,474	3,019 37
1,844 65	505 70	24 83	14	27	4,827	2,375 18
2,021 31	305 02	27 50	14	27	10,215	2,353 83
$27,993 94	$3,234 11	$366 63	.....	.....	77,728	$31,594 68

TABLE A—Continued.

Monthly Statement of Work Done in the Street Cleaning Department,

Month Ending.	District No. 5. Superintendent.	Total No. Loads of Garbage Collected and Removed.	Total No. Loads of Ashes Collected and Removed.	Total No. Loads of Street Dirt, Sand, Snow, etc., Collected and Removed.
Jan. 31.....	John E. Gist.....	256	2,814	9,234
Feb. 29.....	" "	179	2,321	3,807
Mar. 31	" "	269	2,633	5,836
April 30.....	" "	231	2,485	2,948
May 31.....	" "	428	2,172	2,745
June 30.....	" "	563	1,265	2,201
July 31.....	" "	940	1,434	2,840
Aug. 31.....	" "	1,134	1,170	1,970
Sept. 30.....	" "	1,064	1,392	2,257
Oct. 31	" "	1,598	2,404	2,744
Nov. 30.....	" "	756	2,350	2,293
Dec. 31.....	" "	493	3,621	8,315
Total for year 5th District.....		8,011	26,081	47,190

TABLE A—Continued.

with the Cost of Same, in Each Separate District for the year 1904.

Cost of Collecting and Removing Street Dirt, Sand, Snow, etc.	Amount Expended for Sweeping Machines, Sprinklers and Repairs.	Amount Expended for Tools, etc.	No. of Street Carts and Men Employed.	No. of Sweepers and Scrapers Employed.	Total No. of Loads of all Kinds Removed.	Total Amount Expended.
$3,150 02		$ 40 47	25	36	12,304	$3,190 49
1,781 73		21 54	13	21	6,307	1,803 27
2,534 53	$ 51 94	44 44	29	33	8,738	2,630 91
2,489 32	179 30	32 40	29	32	5,764	2,701 02
2,403 02	249 74	30 19	19	27	5,345	2,682 95
2,001 14	379 74	27 79	16	25	4,029	2,408 67
2,566 59	357 13	19 00	16	25	5,214	2,942 72
1,825 32	421 59	19 40	16	25	4,274	2,266 31
2,077 00	358 04	28 95	16	25	4,713	2,463 99
2,418 69	421 90	23 92	15	21	6,766	2,864 51
1,862 18	443 56	26 78	15	23	5,399	2,332 52
1,975 44	301 00	32 50	15	23	12,429	2,308 94
$27,084 98	$3,163 94	$347 38	.....	.....	81,282	$30,596 30

TABLE A—Continued.

Monthly Statement of Work Done in the Street Cleaning Department,

Month Ending.	District No. 6. Superintendent.	Total No. Loads of Garbage Collected and Removed.	Total No. Loads of Ashes Collected and Removed.	Total No. Loads of Street Dirt, Sand, Snow, etc., Collected and Removed.
Jan. 31.....	M. Doonan.....	256	2,814	13 855
Feb. 29.....	"	179	2,321	5,649
Mar. 31	"	266	2,633	10,342
April 30.....	"	331	2,485	4,401
May 31	"	428	2,172	4,791
June 30.....	"	563	1,265	3,880
July 31.....	"	940	1,434	4,329
Aug. 31.....	"	1,344	1 170	3,331
Sept. 30.....	"	1,064	1,392	3,588
Oct. 31.....	"	1,598	2,424	4,015
Nov. 30.....	"	755	2,349	2,930
Dec. 30.....	"	492	3,637	11,532
Total for year 6th District		8,006	26,096	72,643

TABLE A—Continued.

w th the Cost of Same, in Each Separate District for the Year 1904.

Cost of Collecting and Removing Street Dirt, Sand, Snow, etc.	Amount Expended for Sweeping Machines, Sprinklers and Repairs.	Amount Expended for Tools, etc.	No. of Street Carts and Men Employed.	No. of Sweepers and Scrapers Employed.	Total No. of Loads of all Kinds Removed.	Total Amount Expended.
$4,819 84		$84 84	33	52	16,925	$ 4,904 68
3,162 75	42	46 89	24	35	8,149	3,210 06
3,404 33	$ 90 97	101 60	33	57	13,241	3,596 90
4,052 17	341 91	58 05	43	49	7,217	4,452 13
4,089 66	499 39	51 44	32	42	7,391	4,640 49
3,411 65	759 48	46 04	28	38	5,708	4,217 17
4,097 01	714 26	34 00	28	38	6,703	4,845 27
2,790 73	843 18	34 60	25	32	5,635	3,668 51
3,047 44	358 02	48 15	25	32	6,044	3,453 63
3,449 95	440 42	43 17	27	32	8,037	3,933 54
2,496 74	892 80	48 43	27	32	6,034	3,427 97
2,666 73	304 86	53 12	27	32	15,661	3,024 71
$41,489 00	$5,245 73	$650 33	.....	.....	106,745	$47,385 06

TABLE A—Continued.

Monthly Statement of Work Done in the Street Cleaning Department,

Month Ending.	District No. 7. Superintendent.	Total No. Loads of Garbage Collected and Removed.	Total No. Loads of Ashes Collected and Removed.	Total No. Loads of Street Dirt, Sand, Snow, etc., Collected and Removed.
Jan. 31.....	B. T. Sarber.....	256	2,814	11,416
Feb. 29.....	" "	179	2,321	6,271
Mar. 31.....	" "	266	2,633	17,678
April 30.....	" "	311	2,485	6,765
May 31.....	" "	428	2,172	3,285
June 30.....	" "	563	1,265	2,329
July 31.....	" "	940	1,434	2,793
Aug. 31.....	" "	1, 34	1,170	2,162
Sep. 30.....	" "	1,064	1,392	2,246
Oct. 31.....	" "	1,912	2,110	2,905
Nov. 30.....	" "	755	2,352	2,066
Dec. 31.....	" "	489	3,623	6,140
Total for year 7th District.....		8,297	25,771	66,056

TABLE A—Continued.

with the Cost in Same, in Each Separate District for the Year 1904.

Cost of Collecting and Removing Street Dirt, Sand, Snow, etc.	Amount Expended for Sweeping Machines, Sprinklers and Repairs.	Amount Expended for Tools, etc.	No. of Street Carts and Men Employed.	No. of Sweepers and Scrapers Employed.	Total No. of Loads of all Kinds Removed.	Total Amount Expended.
$2,981 36	.....	$ 38 47	18	45	14,486	$3,019 83
1,784 19	.....	19 54	13	22	8,771	1,803 73
2,380 20	$ 50 28	52 44	29	33	20,577	2,482 92
2,468 58	320 47	32 40	29	33	9,561	2,821 45
2,373 79	385 29	30 19	19	27	5,885	2,789 27
2,042 60	379 74	24 79	15	26	4,157	2,447 13
2,536 12	357 13	27 00	15	26	5,167	2,920 25
1,891 83	421 59	17 60	15	26	4,466	2,331 02
2,027 79	358 04	26 95	15	25	4,702	2,412 78
2,438 95	407 88	21 92	15	21	6,927	2,868 75
1,738 88	444 52	24 83	15	21	5,173	2,208 23
1,858 46	304 80	37 50	15	21	10,252	2,200 76
$26,522 75	$3,429 74	$353 63	.....	.....	100,124	$30,306 12

TABLE B.

REPORT OF WORK DONE, INCLUDING ALL EXPENDITURES IN THE STREET CLEANING DEPARTMENT FOR EACH MONTH OF THE YEAR ENDING DECEMBER 31, 1904, ALSO AMOUNT OF RECEIPTS FROM SALE OF REFUSE, ETC.

1904. MONTH.	Total No. of Loads of Garbage Removed.	Total No. of Load of Ashes Removed.	Total No. of Loads of Street Dirt, Sand, Snow, Ice, Etc., Removed.	Cost of Collecting and Removing Ashes and Garbage.	Cost of Collecting and Removing Street Dirt, Sand, Snow, Ice, Etc	Incidental Expenses.	Cost of Sweeping Machines, Sprinklers, Repairs, Etc.	Salaries.	Cost of Tools, Repairs, Etc.	Cost of Printing.	Cost of Sprinkling Roads, Etc.	Cost of Cleaning Sewers and Inlets, Including Tools.	Total No. of Loads Removed from Sewers and Inlets.	Total No. of Loads of All Kinds Removed.	Total Amount of Expenditures.	Total Amount of Money Received and Paid to Comptroller.
January	1,791	19,692	65,272	$16,316 67	$21,506 21	$197 64	$ 30 00	$1,938 42	$328 53			$1,112 99	1,772	86,755	$37,431 02	
February	1,253	16,229	28,915	16,316 07	13,216 28	70 25		1,376 64	176 70			868 29	782	46,397	36,024 27	
March	1,864	18,439	62,793	16,316 67	17,193 34	71 06	478 60	1,393 38	385 66			904 13	1,083	83,096	40 902 95	
April	2,297	17,395	26,998	16,316 67	21,940 87	96 84	1,648 17	1,385 06	224 38			1,295 97	683	46,690	38,237 19	
May	2,996	15,204	19,832	16,316 67	13,361 60	71 85	2,383 69	1,384 97	244 05	$10 50		1,106 20	673	38,032	45,823 23	
June	3,941	8,855	15,349	16,316 67	13,280 73	62 65	3,037 93	1,385 05	210 18			1,024 14	585	28,145	53,793 26	
July	6,580	9,967	18,222	16,316 67	15,755 28	77 94	2,857 05	1,354 79	163 42			1,184 94	693	34,769	34,606 04	
August	7,938	8,190	13,768	16,316 67	11,491 14	100 00	3,372 71	1,384 72	151 00			1,253 92	668	29,896	41,947 18	
September	7,445	9,744	14,822	16,316 66	12,546 66	40 95	2,506 22	1,385 06	254 75		$742 78	1,342 41	701	32,011	46,295 38	
October	12,442	15,712	17,939	16,316 66	15,445 77	66 54	2,984 60	1,384 97	184 70	22 00	186 75	2,412 53	695	46,093	31,222 39	
November	5,285	16,447	13,363	16,316 66	12,301 95	80 80	3,566 73	1,385 06	212 94			2,756 48	634	35,095	46 717 61	
December	3,415	25,382	44,679	16,316 66	12,966 98	63 48	2,132 51	1,385 06	253 64			2,299 66	1,073	73,476 10,042	36,158 32	
	57,247	181,256	341,952	$195,800 00	$181,006 81	$1,000 00	$24,998 21	$17,143 18	$2,789 95	$32 50	$929 53	$17,561 66	10,042	590,497	$489,158 84	$3,395 97

TABLE C.

FINANCIAL STATEMENT OF DEPARTMENT OF STREET CLEANING APPROPRIATION FROM JANUARY 1, 1904, TO DECEMBER 31, 1904.

	Amount of Appropriations.	Expended from January 1, 1904, to December 31, 1904.	Credit Balances December 31, 1904.	Revenue from Sale of Refuse, etc.
Removal of garbage and refuse	$195,800 00	$195,800 00		
Street carts and men	92,360 43	92,360 43		
Sweepers and scrapers	88,678 58	88,646 38	$ 32 20	
Sweeping machines, sprinklers, etc.	25,000 00	24,998 21	1 79	
Tools and repairs	2,793 03	2,789 95	3 08	
Incidental expenses	1,000 00	1,000 00		
Salaries	17,208 34	17,143 18	65 16	
Printing	100 00	32 50	67 50	
Cleaning sewers, including tools	17,561 96	17,561 66	30	
Sprinkling roads, etc.	1,000 00	929 53	70 47	
Emergency Fire Fund, per Ordinance	3,462 67	3,462 67		
Emergency Fire Fund, per Ordinance	15,000 00	14,992 67	7 33	
Total	$459,965 01	$459,717 18	$247 83	$3,395 97

Total amount original appropriation	$427,502 34
Extra from General Contingent Fund	14,000 00
Extra from Western Maryland Emergency Fire Fund	3,462 67
Extra from Western Maryland Emergency Fire Fund, per Ordinance	15,000 00
Total appropriation	$459,965 01
Total expended	459,717 18
Unexpended balance	$247 83
Revenue from sale of refuse, etc.	3,395 97
Total transferred to City Register	$3,643 80
Total received and disbursed on account of removal of debris	$29,441 66

TABLE D.

Summary.

Total number of cubic yards of garbage collected and removed, 1904		128,806
Total number of cubic yards of ashes and refuse collected and removed, 1904		407,826
Total number of cubic yards of street dirt, sand, snow and ice collected and removed, 1904		512,928
Total amount removed from sewers and inlets		15,084
Total of all kinds removed for 1904	cubic yards	1,064,644
Total amount paid for removing garbage and ashes, etc		$195,800 00
Total amount paid for collecting street dirt, snow, ice, etc.		181,006 81
Total amount paid for sweeping and sprinkling streets by machines		24,998 21
Total amount paid for tools and repairs		2,789 95
Total amount paid for Incidental expenses		1,000 00
Total amount paid for salaries		17,143 18
Total amount paid for printing		32 50
Total amount paid for cleaning sewers and inlets, including tools		17,561 66
Total amount paid for sprinkling, roads, etc		929 53
Total amount paid for emergency Fire Fund		18,455 34
Total amount paid for 1904		$459,717 18
Total amount received for sale of refuse		$3,395 97
Total number of street carts employed 1904		98
Total number of street sweepers and scrapers		168
Total number of sewer men		15
Total		281

NOTE—Garbage, ashes and refuse collected by contract.

TABLE E.

NUMBER OF DEAD ANIMALS, ETC., REMOVED BY CONTRACTOR FROM JANUARY 1 TO DECEMBER 31, 1904.

Dogs	5,217
Cats	7,679
Rats	1,868
Goats	14
Sheep	5
Cows	3
Calf	1
Mules	1
Pigs	1
Rabbits	27
Fowl	717
Total	15,533

Total number of animals removed	14,816
Total number fowls removed	717
Total number pounds meat removed	231
Total number pounds fish removed	523
Total number pounds crabs removed	104

TABLE F.

STATEMENT OF DISBURSEMENTS ON ACCOUNT OF APPROPRIATION OF $15,000.00, AS PER ORDINANCE FOR EMERGENCY FIRE FUND, FROM JUNE 4 to DECEMBER 31, 1904.

Weekly pay rolls for carts and sweepers from June 4 to December 31, 1904	$7,332 89
Sprinkling in Burnt District and vicinity	2,740 54
Baltimore and Ohio Railroad—Car Service—Removing Debris	3,239 90
M. T. Horner, scow service for street dirt	1,340 26
H. P. McElroy, repairs on wagon	100 00
J. L. Vaeth, repairs on tools	75 65
John T. Donohue, tools	54 00
V. Limerick, badges	75 00
City Engineer, lumber	34 43
Total expenses	14,992 67
Balance returned to City Register	7 33
	$15,000 00

TABLE G.

COMPARATIVE COST PER LOAD FOR REMOVAL AND COLLECTION OF GARBAGE, ASHES AND REFUSE, ALSO PER CUBIC YARD FOR COLLECTION OF STREET DIRT, SNOW AND ICE FOR YEARS 1904–1903.

	No. of Loads.	Cost per Load.	Total Cost.
For 1904, Garbage, ashes, etc	238,503	.82	$195,800 00
For 1903, Garbage, ashes, etc	221,718	.664	147,300 00
	No. of Cubic Yds.	**Cost per Cubic Yard**	
*For 1904, Street carts and men	232,779	.545	$126,940 41
For 1903, Street carts and men	260,430	.641	167,147 30
For 1904, Removal of snow and ice	280,149	.218	61,399 29
For 1903, Removal of snow and ice	9,377	.234	3,302 74
1904, Received for sale of refuse, etc			$3,395 97
1903, Received for sale of refuse, etc			960 10
Increase, 1904			$2,435 87

*This does not include 7,858 cubic yards of street dirt dumped on the debris platforms Were this included the cost per load for 1904 would be considerably reduced.

TABLE H.

TOTAL NUMBER OF MILES OF STREETS SWEPT BY MACHINES EACH MONTH FROM JANUARY 1 TO DECEMBER 31, 1904.

Swept in	Miles.		Amount.
January	No sweeping on account of ice, snow and cold weather		
February	No sweeping on account of ice, snow and cold weather		
March	150	Cost per month	$ 334 46
April	589	Cost per month	1,313 71
May	856	Cost per month	1,972 45
June	823	Cost per month	2,057 15
July	808	Cost per month	2,034 32
August	805	Cost per month	2,399 07
September	744	Cost per month	2,255 16
October	876	Cost per month	2,389 38
November	840	Cost per month	2,279 07
December	137	Cost per month	1,004 03
Total for year.	6,628	Total cost	$18,038 80

Average daily sweeping $24\frac{10}{100}$ miles which represents only about nine months sweeping. On account of the very severe weather it was impossible to use sweepers.

The sweeping is done by the city; the teams furnished under contract; the collection and removal by city carts and men; the sweepings in part being sold or hauled to city dumps.

TABLE I.

STATEMENT OF REMOVAL OF DEBRIS ON ACCOUNT FIRE OF FEBRUARY 7 AND 8, 1904.

1904.	DR.	CR.
By		
Received from sale of dump tickets from March 11 to July 27, 144,234 tickets at 20 cents		$28,846 80
Receipts sale of lumber, etc		594 86
To		
Paid for lumber for platforms.	$2,701 57	
" for carpenters pay rolls, building platform	2,165 41	
" for hardware	190 82	
" for weekly pay rolls on platforms for Inspectors, etc	9,057 75	
" for small bills, printing, etc	304 03	
Baltimore & Ohio Railroad, removing debris, 141,234 cubic yards, car service, etc.	15,022 08	
	$29,441 66	$29,441 66

TENTH ANNUAL REPORT

—OF THE—

Free Public Bath Commission

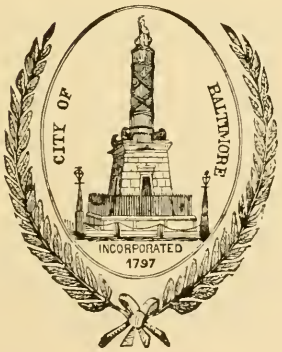
OF BALTIMORE

—TO THE—

Mayor and City Council of Baltimore

—FOR THE—

FISCAL YEAR ENDING DECEMBER 31, 1904.



BALTIMORE, MD.
WM. J. C. DULANY COMPANY,
CITY PRINTERS.

1905.

Free Public Bath Commission of Baltimore

APPOINTED MAY 18, 1900.

President:

EUGENE LEVERING.

Vice-President and Treasurer:

WILLIAM H. MORRISS.

MARY SHERWOOD, M.D. JOSEPH E. GICHNER, M.D.
JOHN S. FULTON, M.D. GEORGE W. CORNER, JR.
MORRIS A. SOPER.

Secretary and Superintendent:

REV. THOMAS M. BEADENKOFF.

STANDING COMMITTEES.

Indoor Baths—Walters No. 1:

G. W. CORNER, JR. MARY SHERWOOD, M.D.
MORRIS A. SOPER.

Indoor Baths—Walters No. 2:

J. E. GICHNER, M.D. MARY SHERWOOD, M.D.
JOHN S. FULTON, M.D.

Outdoor Baths:

Gwynn's Falls—J. E. GICHNER, M.D.
Winans' Beach—J. S. FULTON, M.D.; G. W. CORNER, JR.
Canton—MORRIS A. SOPER.

The President and Vice-President are ex-officio members of all Committees.

FINANCIAL STATEMENT, 1904.

Expenditures.

Superintendent		$ 550 00
Clerk		150 00
Salaries Bath No. 1	$4,597 64	
Expenses Bath No. 1	3,263 17	
		7,860 81
Salaries Bath No. 2	$3,822 00	
Expenses Bath No. 2	1,718 63	
		5,540 63
Salaries Men's Outdoor Bath	$1,146 47	
Expenses Men's Outdoor Bath	1,542 85	
		2,689 32
Salaries Women's Outdoor Bath	$ 201 25	
Expenses Women's Outdoor Bath	197 65	
		398 90
Total expenses		$17,189 66

Receipts, 1904.

Bath House No. 1	$4,141 10	
Laundry No. 1	207 11	
		$4,348 21
Bath House No. 2	$2,187 49	
Laundry No. 2	213 55	
		2,401 04
Men's Outdoor Bath		594 20
Women's Outdoor Bath		29 41
Total receipts		$7,372 86
Net expenses		$9,816 80

REPORT.

Hon. E. Clay Timanus,
Mayor of the City of Baltimore.

Dear Sir:—

The Free Public Bath Commission of the City of Baltimore respectfully report upon the work committed to them for the year 1904, as follows:

EXTENDED USEFULNESS.

"The United States Bulletin of Bureau of Labor," containing a report upon Public Baths in America, recently issued, informs us that in 34 American cities provision is now made by municipalities for this means of preserving public health. Annual expenditures for this purpose vary from a few hundred dollars in small towns to the large sum of $168,000 in cities like Boston and New York. The annual attendance varies from 6,000 in small towns to 6,000,000 in New York City.

BALTIMORE WELL IN THE LEAD.

The Baltimore Baths maintained by the municipality occupy an important place, not only in the City of Baltimore itself, but as a model for cities of its size who are administering or contemplating the maintenance of similar public establishments.

Your Commission has received during the year past applications for literature and assistance in administration from the following cities: Toledo, Ohio; Washington, D. C.; Richmond, Va.; St. Louis, Mo.; Detroit, Mich.; Winnepeg, Manitoba; Pittsburgh, Pa., and Cleveland, Ohio.

EXTENT OF EQUIPMENT.

The Commission has under its charge two bath-houses, viz: 131–133 South High street, known as Walters Baths No. 1, and 900–902 Columbia avenue, known as Walters Baths No. 2, and a bath-house now in course of erection at 1018-1022 Argyle avenue, which will be known as Walters Baths No. 3.

In addition to these baths, which are open all the year round, the Commission operates four summer baths on the water front, viz: at Winans' Beach, near Ferry Bar; Gwynn's Falls, near House of Refuge; Canton and Locust Point, the last named being for women only.

The accommodations at these bath-houses are as follows:

No. 1	32	cabins	for	men.	14	cabins	for	women.
No. 2	20	"	"	"	10	"	"	"
No. 3	12	"	"	"	5	"	"	"
Winans'	175	"	"	"	...			
Gwynn's	40	"	"	"	...			
Canton	30	"	"	"	...			
Locust Point	...				20	"	"	"
	309				49			

In addition to these bathing facilities, two Public Laundries are also operated, viz: at Walters Baths No. 1 and at Walters Baths No. 2.

To these places women carry their soiled clothes, and in a comparatively short time accomplish the task of washing and ironing under the most desirable conditions. This feature is a most unqualified success, and is an especial boon to people in the crowded sections of our city, who are otherwise frequently compelled to perform this task under the most unfavorable and uncomfortable conditions.

It will be recognized also that the cleansing of soiled clothing can be accomplished in the public laundry in a manner much more thorough than can be done with the limited facilities usually available in the houses in the crowded sections of our city. Provision is made for the speedy accom-

plishment of all the operations necessary. The washing, boiling and rinsing is done in tubs which are provided with hot and cold water as well as steam; the wringing is accomplished by means of centrifugal machines; the drying by means of drying closets, and the ironing in the ironing rooms.

Thorough drainage and ventilation are possible, adding greatly to the comfort and health of the workers in the laundry.

PATRONAGE OF BATHS.

As an evidence of the increasing usefulness and appreciation of the Public Baths, the following tables of patronage for the year 1904, as compared with 1902 and 1903, speak better than any statement we can make.

1902.	Bathers.
Walters Baths No. 1	111,175
Walters Baths No. 2	40,987
Outdoor Baths	52,665
Laundries	3,056
	207,883

1903.	Bathers.
Walters Baths No. 1	128,449
Walters Baths No. 2	64,935
Outdoor Baths	49,435
Laundries	3,642
	246,461

1904.	Bathers.
Walters Baths No. 1	167,227
Walters Baths No 2	68,594
Outdoor Baths	71,723
Laundries	5,311
	312,855

These figures show a total increase of patronage over 1903 of 66,394.

EXPENSE OF MAINTENANCE.

The expense of maintaining these baths for the year was as follows:

Salaries	$10,573 31	
Maintenance	6,616 35	
		$17,189 66
Less amount paid by patrons		7,541 41
Total		$ 9,648 25

Or a per capita expense of $0.031 per bath.

FREE VERSUS SMALL FEE.

Your Commission has carefully considered the question of making the baths entirely free and doing away with the small fee of three cents now charged; but every investigation leads us to the conclusion that the system in operation in Baltimore is the best. We are already crowded to our capacity and could not easily accommodate more bathers, and in addition we are convinced that the small fee charged (three cents for adults and one cent for children) deters none from using this public convenience, and at the same time preserves the self-respect of the patrons, a most important consideration.

STATISTICAL TABLES.

	Bath No. 1.			Bath No. 2.		
	1902.	1903.	1904.	1902.	1903	1904.
January	4,250	7,365	6,975		2,935	3,494
February	4,162	7,557	8,278		3,283	3,481
March	7,059	10,070	11,387	Opened April 1.	4,934	5,023
April	8,167	11,961	12,357	3,671	5,180	6,226
May	11,690	16,297	19 065	5,160	8,152	7,692
June	14,321	13,267	19,737	6,263	6,344	7,646
July	17,088	17,572	22,600	7,488	9,151	8,627
August	14,182	14,407	19,872	6,679	7,453	7,316
September	9,360	10,637	16,014	3,556	6,170	6,042
October	7,794	7,594	10,482	2,764	4,487	5,464
November	7,259	5,697	9,793	3,180	3,494	3,874
December	5,843	6,025	10,667	2,206	3,352	3,709
	111,175	128,449	16.7227	40,987	64,935	68,594

STATISTICAL TABLES—Continued.

	Laundries.			Outdoor Baths.		
	1902.	1903.	1904.	1902.	1903.	1904.
January	326	493	732	.....	.....	.....
February	334	409	625	.....	.....	.....
March	246	424	532	.....	.....	.....
April	141	319	376	.....	.....	.....
May	173	281	351	.....	.....	.....
June	170	262	343	17,252	11,811	20,560
July	246	244	293	21,915	25,569	29,712
August	196	230	311	11,923	10,576	17,802
September	227	189	282	1,575	1,469	3,649
October	236	190	343	.....	.....	.....
November	305	230	401	.....	.....	.....
December	456	371	722	.....	.....	.....
	3,056	3,642	5,311	52,665	49,435	71,723

The character of the patronage of the baths remains about the same, year after year. The following figures indicates the proportion of men and women, boys and girls who use the baths:

Baths.	Men.	Women.	Boys.	Girls.
Baths No. 1	98,962	33,180	27,453	11,014
Baths No. 2	54,020	7,432	5,101	3,968
Outdoor Baths for Men	28,561	.....	38,000	.....
Outdoor Baths for Women	.....	608	2,554	2,000
	181,543	41,220	83,108	16,982

The large proportion of men using the baths is a subject of congratulation, as in many cities the boys outnumber the men.

The fire brought to our baths a large number of volunteer soldiers (officers and men), and it was the privilege of the Commission to afford bathing facilities for 1,461 of these citizen-soldiers without charging the usual fee.

ENLARGEMENT OF No. 1 BATHS.

The additional gift of $15,000 by Mr. Henry Walters for the enlargement of No. 1 doubled the capacity of this bath-house. This addition was opened to the public on January 22nd, upon which occasion the late Mayor, Robert M. McLane, with a number of other city officials, honored the occasion by their presence. The added facilities at once justified the large outlay, and we record this year not only an addition of 40,000 bathers at this house, but the banner day of 1,792 patrons, outnumbering any day with our former equipment by 450 patrons.

Increased facilities have also been added at the outdoor baths at Winans' Beach.

AT THE OUTDOOR BATHS.

The increased patronage at the baths on the water front of 22,288 is sufficient evidence of their popularity. The Gwynn's Falls Baths, now situated near the House of Refuge, will have to be removed. The deposit of sand brought down by the near-by quarries and the bridge just built by the Wabash Railroad, render the old site unfit for further use as a bathing beach. The Commissioners have selected a more suitable location near Edmondson avenue, and we hope in this way to accommodate a large number of patrons in the nothwestern section of our city. In the establishment of this bath we have enjoyed the co-operation of the Park Board, in whose territory the proposed site is located.

Fifty-two new bathing cabins are now being added to our equipment at Winans' Beach, making the total number of cabins 164. This will be more adequate to the need, but during the heated term, even with this equipment, we shall fall short of the real needs of the patrons.

To add to the popularity of this bathing station the Commissioners have arranged for longer hours, so that instead of closing at 7 o'clock in the evening, as heretofore, the baths will be open and lighted by electricity until 9 P.M. This will accommodate a large number of working people who have not the leisure to enjoy the baths during the day time.

BATHING PLACES IN PARKS.

The Commission has had several conferences with members of the Park Board in an effort to establish swimming baths in connection with some of the public parks. No definite decision has yet been reached, but we are glad to record the very hearty co-operation of the Park Board in what seems to your Commission a very practical and necessary public service. The introduction of such swimming pools in the parks is a matter needing careful thought in order that when the movement is inaugurated it may be upon a permanent basis. The United States Government report, before referred to, furnishes ample evidence that such outdoor swimming places in public parks is no longer an experiment. The effort of the Mayor and City Council to select a public park by the bay side, where ample bathing facilities will be provided, is noted with pleasure by the Commission, and is in keeping with the work of progressive cities in this country.

PUBLIC SCHOOL BATHS.

At the request of the School Board, your Commission has prepared and submitted plans for school shower baths, similar to those in use in Boston, New York and other cities in this country and in Europe.

One of the gravest problems in school sanitation in the larger cities, and especially in schools situated in the poorer sections, has been not only to keep the schoolrooms in a clean and sanitary condition, but also to secure cleanliness in the dress and person of the children coming from houses which are but poorly provided with facilities for bathing.

The effort to improve conditions in this respect by the establishment of rules prohibiting the admittance of children who fall below the requirements as to cleanliness in dress and person has seldom been successful to any considerable degree. Much, however, is expected from the introduction of shower baths in these schools, and the Commission is assured that in the new schoolhouses to be erected in certain parts of our city such provision for cleanliness will be made. The Commission is ready to furnish complete data as to construction, expense and maintenance of such schoolhouse baths.

WALTERS BATHS No. 3

Increase in cost of material and labor has delayed the erection of the bath-house for colored people, to be known as Walters Baths No. 3. We can now report, however, that work has begun on this site (Nos. 1018-1022 Argyle avenue), and that by the summer of this year we shall be ready for patrons. This bath-house is also the gift of Mr. Henry Walters to the city. Baths No. 3 will be equipped with 15 shower and 2 tubs, and will be as handsome a structure as the houses already erected. The architects are Messrs. Archer & Allen, and the builders, Messrs. Brady & Watters. Messrs. W. H. Rothrock & Co. will have charge of the plumbing and steam fitting.

The bath-house will be for the exclusive use of colored people.

EXHIBIT AT ST. LOUIS EXPOSITION.

At the request of the United States Government officials, your Commission sent to the Louisiana Purchase Exposition complete descriptions of the public baths in Baltimore, together with a full set of photographs of indoor and outdoor baths and laundries. This exhibit received commendation, and we have been requested to allow the same to be further used by the officials in the promotion of similar enterprises in other parts of the country. The exhibit will be used also at the Lewis & Clark Exhibition at Portland, Oregon, in June of this year.

OPPORTUNITIES FOR FURTHER EXTENSION.

The success of our present bath-houses leads us to believe that there are other parts of our city where such facilities would be gladly welcomed. The large section known as Fell's Point, covering an area occupied by houses built before the present beneficent law in respect to bath-rooms in houses was in operation, ought to be the next part of our city to have a public bath-house and laundry, and your Commission strongly recommends this to the consideration of the municipality.

PUBLIC COMFORT STATIONS.

Your Commission suggests for the consideration of the proper committee of the general committee upon improvements the necessity for providing what are known as Public Comfort Stations at certain places in the business part of the city. This Commission has secured data from other cities in regard to the cost of equipment, maintenance and wide usefulness of such places of public convenience, and will be glad to furnish the same to the proper authorities.

The necessity for some such provision in the new city now being built seems to us imperative.

CO-OPERATION ACKNOWLEDGED.

The work of this Commission has now become established as a legitimate and much needed public service. It is due to the various city officials whose work brings them in contact with this comparatively new department to express to them our appreciation of their hearty co-operation and efficient help. We especially desire to acknowledge our indebtedness to the Police Department for their valued assistance at the outdoor baths.

Respectfully submitted,

EUGENE LEVERING,
President.

ANNUAL REPORT

— OF THE —

COLLECTOR of WATER RENTS and LICENSES

— TO THE —

Mayor and City Council of Baltimore

— FOR THE —

FISCAL YEAR ENDING DECEMBER 31, 1904

BALTIMORE, MD.
WM. J. C. DULANY COMPANY,
CITY PRINTERS.

1905.

REPORT.

DEPARTMENT OF FINANCE,
SUB-DEPARTMENT
COLLECTOR OF WATER RENTS AND LICENSES,
CITY HALL,

BALTIMORE, January 1, 1905.

To the Honorable the Mayor and Members of the City Council:

GENTLEMEN:

I beg to submit herewith my Annual Report for the year ending December 31, 1904, showing the collections made for Water Rents and Licenses by the following statements for your consideration.

The number of water takers for the year 1904 was 101,472, an increase of 289 over the year 1903.

The collections made of water rents, plumbing bills, etc., amounted to $821,275.93, and were less than those of 1904 by $40,921.62.

From these collections $1,165.73 were returned by errors caused by mistakes in statements of property owners and allowances for vacancies.

The total receipts from licenses amounted to $89,857.20, which is $9,236.09 more than in 1904.

I would again call the attention of your Honorable Body to the fact that there should be an increase in the number of employees in this office, both in Ledger Clerks for the inside and Inspectors for outside work. An ordinance was introduced into the City Council recently for this purpose for an increase of two Ledger Clerks and four Inspectors, but did not receive the favorable consideration of your Honorable Body. Had this ordinance become a law it would have in-

creased the number of Inspectors to eight, two more than were asked for a year ago, this increase being made necessary by the passage of a new ordinance for water rents.

In this connection I beg to quote from my last annual report:

"I most respectfully recommend to your Honorable Body the necessity of two more Ledger Clerks and two additional Inspectors, the former to prevent the great rush in this Department at certain seasons of the year, and the latter to look after 'New Discoveries,' make inspections and give more attention to their districts in general. The city at present is divided into four districts, one Inspector to each, and by this addition to the force they would also be able to discover who had not secured licenses, which branch of this Department should be looked after more than it has in the past.

"I feel convinced in making this recommendation that a large revenue could be gained for the city through the additional Inspectors asked for, both in receipts for the Water Department as well as in licenses, and by the adoption of these suggestions the service would be improved to an immeasurable degree.

"Our force in this office up to and including 1899 was twenty-five (25) employees, who handled only the collections of the Water Department. In 1900 it was reduced to seventeen (17) men, notwithstanding the collections of licenses was transferred from the Comptroller's Office to this Department, which gives much additional work."

The decrease of $40,921.62 in the collection for water rents was caused by the great fire of February 7 and 8 of last year. As the "Burnt District" rebuilds much of the revenue which was lost last year will gradually be regained with an increase.

The new ordinance, approved July 5, 1904, making a general increase in the water rents throughout the city, which goes into effect this year, beginning January 1, will add very

materially to the receipts of the Water Department, and prevent the necessity of curtailing important work for the lack of funds experienced since the reduction made in the rates a few years ago.

It again affords me pleasure to make favorable mention of the efficient and prompt manner in which all the employees in this Department have discharged their duties.

The accompanying tabulated statements set forth in detail the work accomplished:

A—Collections of water rents.

B—Expenditures.

C—Monthly receipts of water rents.

D—Abatements.

E—New supplies and ferrules returned.

F—Balances remaining on Ledgers December 31, 1904.

H—Receipts for Licenses.

All of which is respectfully submitted,

J. Spencer Clarke,
Collector of Water Rents and Licenses.

STATEMENT A.

Collections Made for Water Department During the Year 1904.

		Dr.	Cr.
To water rents for 1905	$8,980 00		
Less discount	449 88		
		$8,530 12	
To water rents for 1904	$433,641 16		
Less discount	13,211 22		
		420,429 94	
To water rents for 1903		77,662 33	
To water rents for 1902		2,598 60	
To water rents for 1901		1,613 46	
To meter rents		273,268 54	
To interest on back water rents		1,989 30	
To plumbing bills		23,540 93	
To meter plumbing		10,267 71	
To vacancies		215 00	
To turn-offs		1,160 00	
By deposits with the City Register:			
January			149,983 82
February			114,469 39
March			71,387 29
April			96,479 89
May			51,658 30
June			31,181 17
July			74,160 22
August			12,375 05
September			29,439 50
October			121,145 18
November			35,514 13
December			33,481 99
		$821,275 93	$821,275 93

STATEMENT B.

Expenditures During the Year 1904.

Appropriation made by Mayor and City Council:		
For expenses, including $385,250 for interest on water loans	$387,511 00	
For salaries	23,520 84	
		$411,031 84
Amount expended for expenses	$382,986 46	
Amount expended for salaries	21,554 21	
		404,540 67
Amount unexpended, which includes $4,550 for interest on 1943 loan, which was not used		$6,491 17

STATEMENT C.

Receipts of the Collector of Water Rents and Licenses from Water Rents for the Year 1904.

	January.	February.	March.	April.
Water rents for 1904	$64,927 18	$106,417 69	$60,300 26	$22,458 82
Water rents for 1903	15,014 46	4,354 92	7,324 49	10,480 38
Water rents for 1902	96 93	93 92	167 34	107 25
Water rents for 1901	73 39	115 59	92 08	126 08
Meter rents	67,011 48	1,748 30	1,797 97	60,382 65
Plumbing bills	1,005 32	1,289 02	1,223 90	1,881 49
Meter plumbing	1,722 99	365 37	335 28	799 38
Int. on back water rents	87 07	68 58	132 97	232 84
Turn-offs	4 00	5 00	3 00	2 00
Vacancies	41 00	11 00	10 00	9 00
	$149,983 82	$114,469 39	$71,387 29	$96,479 89

STATEMENT C—Continued.

	May.	June.	July.	August.
Water rents for 1904	$17,128 15	$16,345 67	$9,688 54	$7,879 50
Water rents for 1903	28,201 21	8,426 91	1,360 17	502 50
Water rents for 1902	681 76	366 07	202 42	95 00
Water rents for 1901	245 00	284 58	196 42	37 00
Meter rents	1,738 00	2,254 02	59,470 02	1,432 56
Plumbing bills	2,424 25	2,459 82	2,442 60	1,944 95
Meter plumbing	239 73	112 47	591 06	406 27
Int. on back water rents	805 20	333 63	86 99	28 77
Turn-offs	178 00	575 00	113 00	39 50
Vacancies	17 00	23 00	9 00	9 00
	$51,658 30	$31,181 17	$74,160 22	$12,375 05

	September.	October.	Nov'm'br	Decemb'r.
Water rents for 1905			$ 800 83	$7,729 29
Water rents for 1904	$23,079 99	$48,836 90	24,852 12	18,515 12
Water rents for 1903	228 25	983 41	467 23	318 40
Water rents for 1902	80 00	469 58	143 33	95 00
Water rents for 1901	54 00	260 50	66 75	62 07
Meter rents	2,464 08	66,593 61	5,278 74	3,097 11
Plumbing bills	2,222 68	2,311 88	2,723 79	1,611 23
Meter plumbing	1,225 07	1,425 87	1.088 38	1,955 84
Int. on back water rents	15 93	118 43	42 46	36 43
Turn-offs	65 50	129 00	23 50	22 50
Vacancies	4 00	16 00	27 00	39 00
	$29,439 50	$121,145 18	$35,514 13	$33,481 99

Total water rents for 1905	$ 8,530 12
Total water rents for 1904	420,429 94
Total water rents for 1903	77,662 33
Total water rents for 1902	2,598 60
Total water rents for 1901	1,613 46
Total meter rents	273,268 54
Total plumbing bills	23,540 93
Total meter plumbing	10,267 71
Total interest on back water rents	1,989 30
Total turn-offs	1,160 00
Total vacancies	215 00
	$821,275 93

STATEMENT D.

Abatements Condensed for the Year 1904.

	No.	Delinquent.	Current.	Total.
January	147	$ 558 54	$ 486 08	$ 1,044 62
February	79	454 74	240 71	695 45
March	122	357 54	403 61	761 15
April	190	649 90	560 74	1,210 64
May	280	1,158 73	558 77	1,717 50
June	150	583 69	518 77	1,102 46
July	214	167 16	1,977 47	2,144 63
August	694	302 55	7,041 99	7,344 54
September	99	98 58	555 48	654 06
October	135	441 75	574 71	1,016 46
November	175	483 62	463 87	947 49
December	83	84 50	357 72	442 22
	2,368	$5,341 30	$13,739 92	$19,081 22

STATEMENT E.

New Supplies and Ferrules Returned for the Year 1904.

826 new supplies at $12	$9,912 00
137 new supplies at $8	1,096 00
60 new supplies at $6	360 00
685 joint supplies at $6	4,110 00
44 ferrules returned at $2	88 00
	$15,556 00

STATEMENT F.

Balances Remaining on Ledgers December 31, 1904.

Current water rents	$48,557 87
Delinquent water rents	3,609 83
Meter rates	1,040 00
Plumbing bills	7,596 75
	$60,804 45

STATEMENT G.

Revenue Shown by Ledgers January 1, 1905.

98,972 houses, yielding a revenue of	$623,489 00
Estimated revenue from meters and indicators	270,000 00
	$893,489 00

STATEMENT H.

Receipts from General Licenses for the Year 1904.

One-horse wagons	$17,905 00
Two-horse wagons	12,211 00
Three-horse wagons	633 00
Four-horse wagons	326 00
Six-horse wagons	204 00
Carts	5,224 50
Drays	109 00
Cabs	156 75
Hacks	500 00
Package carts	785 50
Coal oil	2,545 50
Theatrical permits and licenses	2 705 50
Telegraph and telephone poles	17,720 00
Cars	3,000 00
Scows	534 00
Billiard tables	214 95
Pool tables	4,665 20
Bagatelle tables	1,200 85
Bowling alleys	879 20
Pawnbrokers	1,000 00
Privies	406 20
Bacon	650 00
Sausage and pudding	183 75
Merchandise (women)	40 00
Fruit	152 00
Numbers replaced	83 50
Commission merchants	16 55
	$74,051 95
Received for dog licenses	15,805 25
Total receipts	$89,857 20

44th and 45th ANNUAL REPORTS

—OF THE—

Board of Park Commissioners

—TO THE—

Mayor and City Council of Baltimore

—FOR THE—

FISCAL YEARS ENDING DECEMBER 31, 1903, 1904.

BALTIMORE, MD.
WM. J. C. DULANY COMPANY,
CITY PRINTERS.

1905.

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Board of Park Commissioners

OF THE

CITY OF BALTIMORE, MARYLAND.

MAJOR RICHARD M. VENABLE, *President.*
HON. FERDINAND C. LATROBE.
JOHN S. GITTINGS, ESQ.
JAS. E. HOOPER, ESQ.
EDWARD D. BOOZ, ESQ.

W. W. CROSBY, C. E., *General Superintendent.*
J. V. KELLY, *Secretary-Treasurer.*

REPORT OF THE BOARD OF PARK COMMISSIONERS.

BALTIMORE, December 31, 1904.

To The Mayor and City Council of Baltimore.

GENTLEMEN :—In accordance with Section 5, of Ordinance No. 60, approved July 21, 1860, the Board of Park Commissioners herewith submits its report for the years 1903 and 1904.

REPORT FOR 1903.

The present Park Board came into office in the earlier part of October, 1903, and consequently had control of the parks for only three months in that year.

FINANCES.

There is forwarded herewith (See p. 13), the report of the Secretary-Treasurer for the year 1903, exhibiting the receipts and disbursements of the Department during that year.

On taking charge, the present Board found it necessary to make a prompt curtailment of expenses, in order to keep within the appropriation for the year.

Accordingly, as will appear from said report, there was a reduction of the average number of men per month employed from 366 to 265; that is, 101 men per month, and an average reduction of expenditures amounting to $1,531.82 per week for the residue of the year, as compared with the average weekly expenditures for the nine preceding months of the year, and of $343.68 per week, as compared with the expenditures for the months of October, November and December, 1902.

At the expiration of the year there was a cash balance of $18,630.27 on hand.

REORGANIZATION OF FORCE.

The Board on coming into office promptly determined on a reorganization of the park force. This was accomplished by reducing the number of districts from five to four, each under a district superintendent; by appointing a superintendent of a movable force, and by appointing a general superintendent.

The benefits to be derived from this reorganization were:

1. That it secured a unity of purpose and a general superintendence in the entire system by one person, who, according to the resolution of the Board, was to be an educated engineer. The Board is satisfied that the experience of one year has demonstrated the wisdom of having such general superintendence.

2. It enabled the Board to place the work of construction and improvements in the hands of a competent engineer in charge of the movable or floating force, while the work of maintenance and ordinary repairs could be left to the district superintendents. This arrangement led to a curtailment of expenses; for the number of the permanent force required by the several district superintendents could be fixed with reference to the amount of the work of reparation, which should vary little from year to year, and the number of the floating force could be changed according to the very fluctuating demands of new construction or improvements.

SEPARATION BETWEEN CONSTRUCTION AND MAINTENANCE.

The Board has endeavored to separate the work of keeping the parks in repair and in good condition from the work of construction or new improvements. It is not possible, nor is it specially desirable, to draw this line with accuracy. The thing desired was to separate under the name of maintenance that class of work, which required a permanent force working in specified localities, from that kind of work which was done at varying times and in varying amounts. This enabled us to keep the labor employed sufficient, and only sufficient, to do

the work. But there was another and equally important reason for separating that sort of construction which involved changes or new improvements in the parks from mere maintenance.

It was determined by the Board soon after it went into office that all new improvements or changes in the parks costing more than $500 should be done under the advice of a competent landscape architect.

Landscaping is as much an art as painting or sculpture, and should be left to educated specialists. It is easy to see that large sums of money may be wasted in useless changes or construction on the whim of this or that Park Commissioner or Park Board.

Every park belonging to the city which is improved should only be changed on the advice of a landscape architect, and every park which is to be improved should be improved only on plans prepared by such a specialist.

This plan would in the past have saved much money to the city, and will, we hope, in the future be the source of important economies.

The reorganization has certainly increased the efficiency of the park force.

The Board also found it necessary to take some action to elevate the morale of the force. The practice of distributing flowers as favors to members of the Board, and to their friends and to the friends of the superintendents, and other more culpable practices, were promptly forbidden, and all flowers which could be spared from the parks were directed to be distributed to the hospitals. Doing favors with public property is not only a violation of elementary honesty, but has the added element of want of patriotism. It is one of the most insidious forms of graft.

INVENTORY OF PROPERTY.

Under the requirements of City Ordinance No. 35 approved March 5, 1900, each department of the city, having in its possession property belonging to the city, is required to file a complete inventory with the City Librarian. Such an inventory was promptly taken and filed as required, and an additional one has been taken as of the date of January 1, 1905. This latter inventory is taken by districts, and covers all property acquired or lost and consumed since the previous inventory. A complete statement of all the property in possession or control of the Board (See p. 77) is herewith forwarded.

Respectfully,

Board of Park Commissioners,

RICHARD M. VENABLE, *President*.

Report of Secretary-Treasurer.

BALTIMORE, December 31, 1903.

To the Honorable the Board of
Park Commissioners of Baltimore, Md.

GENTLEMEN: I have the honor to submit herewith my report as Secretary-Treasurer of the Board of Park Commissioners for the year ending December 31, 1903.

Respectfully,

J. V. KELLY,
Secretary-Treasurer.

FINANCIAL STATEMENT FOR YEAR ENDING DECEMBER 31, 1903.

		Dr.	Cr.
Cash on hand January 1, 1903:			
Balances from 1901			$4,686 31
" " 1902			6,211 22
			$10,897 53
Receipts 1903, Railway Tax		$347,625 94	
" " Rents		2,338 50	
" " Sales		1,035 89	
" " Fines		110 00	
" " Monument Toll		754 20	
		$351,864 53	
Total Appropriations 1903		351,168 00	
Balance, Receipts over Appropriations		$696 53	
			696 53
EXPENDITURES ON APPROPRIATIONS.			
Salaries Office:			
Appropriation		$3,024 00	
Disbursed	$2,946 00		
Balance	78 00	3,024 00	
			78 00
Salaries, Parks and Squares:			
Appropriation		$188,797 44	
Disbursed	$188,779 88		
Balance	17 56	188,797 44	
			17 56
Expenses, Office.			
Appropriation		$1,640 00	
Disbursed	$1,289 23		
Balance	350 77	1,640 00	
			350 77
Expenses, Parks and Squares:			
Appropriation		$148,398 79	

Disbursed:			
Maintenance	$73,507 25		
Fixed Charges	68,301 66		
	$141,808 91		
Balance	6,589 88	$148,398 79	$ 6,589 88
New Improvements:			
Appropriation		$9,307 77	
Disbursed:			
Greenhouse	$4,078 36		
Mall	2,015 08		
General	3,214 33	9,307 77	
Green Spring Avenue Repairs:			
Balance from 1902 (Special)		$3,513 03	
Disbursed		3,513 03	
Maintenance, Lighting Plant (Special):			
Balance from 1902 (Special)		293 53	
Disbursed		293 53	

NOTE: $7,368.15 included in the above account "Expenses Parks and Squares," was disbursed on account of the lighting plant.

TOTAL BALANCES: Cash on hand January 1, 1904..... $18,630 27

SALARIES AND EXPENSES—PARKS AND SQUARES IN DETAIL.

Salaries—Parks and squares. (For further detail refer to Table "A.")

Appropriation		$188,797 44
Disbursements:		
Druid Hill District	$68,043 35	
Clifton District	32,569 43	
Patterson District	37,337 33	
Carroll District	30,380 46	
Riverside District	17,257 31	
Band Concerts	3,192 00	
Total	$188,779 88	
Balance	17 56	
		$188,797 44

Expenses—Parks and Squares. (For further detail refer to Table "B.")

Appropriation		$148,398 79
Disbursements:		
Druid Hill District	$30,832 57	
Clifton District	11,909 56	
Patterson District	11,137 71	
Carroll District	12,536 49	
Riverside District	7,090 92	
Music Loan, 1902	3,150 00	
Sinking Fund from 1902	1,532 39	
Sinking Fund, 1903	17,381 30	
Green Spring Avenue Loan	6,000 00	
Interest on Loans	39,237 50	
Emergency Fund	1,000 47	
Total	$141,808 91	
Balance	6,589 88	
		$148,398 79

TABLE OF MONTHLY CHARGES, 1903.

1903	Average No. of Men.	Salaries: Parks and Squares.	Salaries: Office.	Expenses: Office.	Expenses: Parks and Squares.			New Improvements	Repairing Green Spring Ave.	Construction of Lighting Plant.	Totals.	Total Payments Per month.	Liabilities carried over at end of each month.
					Liabilities from 1902.	Maintenance and Construction.	Fixed Charges.						
January	292	$ 14,328 95	$252 00	$356 51	$3,807 60	$ 5,801 09	$ 6,330 23		$1,291 93		$ 32,168 31	$ 15,521 13	$16,647 18
February	327	13,444 50	252 00	49 27		6,205 22		658 55	939 33	$105 95	21,654 82	26,273 50	12,028 50
March	412	14,897 02	252 00	289 34		9,030 60	21,042 62	262 50	1,078 14		46,852 22	42,631 00	16,249 72
April	544	20,333 66	252 00	68 76		6,978 78	2,000 00	589 50	189 55	142 73	30,554 98	31,578 18	15,226 52
May	461	26,515 00	252 00	30 10		4,199 04		2,493 13			33,489 27	33,643 92	15,071 87
June	314	14,174 74	200 00	87 52		7,065 37	9,150 00	2,010 67			32,688 30	21,184 35	26,575 82
July	330	16,460 60	226 00	125 98		6,629 39	6,548 81	2,168 39			32,159 17	46,072 78	12,662 21
August	324	14,301 23	252 00	6 50		4,928 85	15,618 75	619 70	14 08	21 00	35,762 11	20,734 56	27,689 76
September	296	12,953 72	252 00	88 80		7,301 66		355 65		23 85	20,975 68	35,088 43	13,577 01
Totals	366	$147,409 42	$2,190 00	$1,102 78	$3,807 60	$58,140 00	$60,690 41	$9,158 09	$3,513 03	$293 53	$286,304 86	$272,727 85	$13,577 01
Balances		41,388 02	834 00	537 22		19,150 00	6,610 78	149 68			68,669 70	82,246 71	13,577 01
Appropriations		$188,797 44	$3,024 00	$1,640 00	$3,807 60	$77,290 00	$67,301 19	$9,307 77	$3,513 03	$293 53	$354,974 56	$354,974 56	
Monthly average for nine months*		$ 16,378 82	$ 243 33	$ 182 22		$ 6,460 00	$ 6,743 38	$1,017 56	$ 390 34	$32 61	$ 31,388 58*		
October	287	$ 15,375 62	$ 252 00	$ 10 25		$ 4,189 55	$ 6,610 78	$ 23 60			$ 26,461 80	$ 17,034 90	$23,003 91
November	259	10,872 34	252 00	96 52		3,773 52					14,994 38	28,073 52	9,924 77
December	249	15,122 50	252 00	79 68		5,128 05		126 08			20,708 31	30,102 08	531 00
Totals	265	$ 41,370 46	$ 756 00	$ 186 45		$13,091 12	$ 6,610 78	$ 149 68			$ 62,164 49	$ 75,210 50	
Balances		17 56	78 00	350 77		6,058 88					6,505 21	7,036 21	$ 531 00
Balances from previous Board		$ 41,388 02	$ 834 00	$ 537 22		$19,150 00	$ 6,610 78	$ 149 68			$ 68,669 70	$ 82,246 71	
Monthly average for three months†		$ 13,790 15	$ 252 00	$ 62 15		$ 4,363 72	$ 2,203 59	$ 49 89			$ 20,721 50†		
Total charges for year		$188,779 88	$2,946 00	$1,289 23	$3,807 60	$71,231 12	$67,301 19	$9,307 77	$3,513 03	$293 53	$348,469 35		
Total payments (See table of payments)		$188,779 88	$2,946 00	$1,289 23	$3,807 60	$70,700 12	$67,301 19	$9,307 77	$3,513 03	$293 53		$347,938 35	
Charges carried to 1904 account						$ 531 00							$ 531 00

*Total monthly average, $31,388.58, less average of fixed charges, $6,743.38, equals $24,645 20

†Total " " 20,721.50, " " " " 2,203.59, " 18,517 91

Difference between average for first nine months and last three months ..... $6,127 29 per month, or $1,531.82 per week

TABLE OF MONTHLY PAYMENTS, 1903.

1093.	Average No. of Men.	Salaries: Parks and Squares.	Salaries: Office.	Expenses: Office.	Expenses: Parks and Squares.		New Improvements.	Repairing Green Spring Ave.	Construction of Lighting Plant.	Totals.
					Maintenance and Construction	Fixed Charges.				
January	292	$14,328 95	$ 252 00	$ 180 00				$ 760 18		$ 15,521 13
February	327	13,444 50	252 00	129 15	$ 5,545 33	$ 6,330 23		466 34	$ 105 95	26,273 50
March	412	14,897 02	252 00	232 80	8,383 02	17,151 14	$ 160 60	1,554 42		42,631 00
April	544	20,333 66	252 00	159 31	7,625 02	2,000 00	510 45	555 01	142 73	31,578 18
May	461	26,515 00	252 00	68 52	6,560 90		84 50	163 00		33,643 92
June	314	14,174 74	200 00	15 00	5,728 18		1,066 43			21,184 35
July	330	16,460 60	226 00	73 70	6,275 36	19,590 29	3,446 83			46,072 78
August	324	14,301 23	252 00	106 80	5,139 99		934 54			20,734 56
September	296	12,953 72	252 00	87 30	4,623 74	15,618 75	1,538 84	14 08		35,088 43
Totals	366	$147,409 42	$2,190 00	$1,052 58	$49,881 54	$60,690 41	$7,742 19	$3,513 03	$248 68	$272,727 85
October	287	$15 375 62	$252 00		$ 562 78		$844 50			$17,034 90
November	259	10,872 34	252 00	$ 68 50	10,029 06	$6,610 78	219 84		$21 00	28,073 52
December	249	15,122 50	252 00	168 15	14,034 34		501 24		23 85	30,102 08
Totals	265	$188,779 88	$2,946 00	$1,289 23	$74.507 72	$67,301 19	$9,307 77	$3.513 03	$293 53	$347,938 35
Cash balances		17 56	78 00	350 77	6,589 88					7,036 21
Grand Total		$188,797 44	$3,024 00	$1,640 00	$81,097 60	$67,301 19	$9,307 77	$3,513 03	$293 53	$354,974 56

TABLE A.

SALARIES: PARKS AND SQUARES IN DETAIL.

Showing Payments made on account of "Salaries—Parks and Squares" for the year 1903. Itemized to show the distribution on each of the several sub-accounts among the five Park Districts.

Sub-Accounts Under Item "Salaries, Parks and Squares." (Position.)	Appropriations.	Druid District.	Patterson District.	Clifton District.	Carroll District.	Riverside District.	Totals.	Balances.	
								Dr.	Cr.
Superintendent Druid Hill District	$1,716 00	$1,749 00					$1,749 00	$ 33 00	
Superintendent Patterson District	1,560 00		$1,590 00				1,590 00	30 00	
Superintendent Clifton District	1,560 00			$1,590 00			1,590 00	30 00	
Superintendent Carroll District	1,300 00				$1,535 00		1,535 00	235 00	
Superintendent Riverside District	1,300 00					$1,314 42	1,314 42	14 42	
Superintendent Harlem District	1,300 00	809 26					809 26		$ 490 74
Keeper Wyman Park	832 00								832 00
5 Square Keepers at $14 per week	3,640 00	434 00		2,086 00	322 00	742 00	3,584 00		56 00
16 Square Keepers at $12 per week	9,984 00	1,662 00	2,526 00	636 00	2,082 00	828 00	7,734 00		2,250 00
Police Sergeant, Druid Hill Park	676 00	581 50					581 50		94 50
25 Night Officers at $10.50 per week	13,650 00	6,271 73	1,648 50	2,583 00	801 00	1,111 50	12,415 73		1,234 27
18 Day Officers at $10.50 per week	9.828 00	4,775 55	2 730 00	1,755 00	972 00	793 50	11,026 05	1,198 05	
4 Gardeners, charge greenhouse	3,744 00	1,321 28	954 00	954 00	906 00	113 84	4,249 12	505 12	
14 Assistant Gardeners	8,736 00	2,340 00	2,323 17	1,862 00	1,684 00		8,209 17		526 83
Head Animal Keeper	728 00	726 00					726 00		2 00
4 Animal Keepers	2,184 00	991 31					991 31		1,192 69
2 Shepherds	1,092 00	1,090 50					1,090 50		1 50
3 Carpenters	2,340 00	1,612 81	616 25	245 00	1,061 25	1,269 18	4,804 49	2,464 49	
2 Painters	1,248 00	2,523 81	507 82	602 00	870 68	512 49	5,016 80	3,768 80	
Bricklayer	1,404 00	1,890 01	396 57	149 76	355 50	434 25	3,226 09	1,822 09	
2 Blacksmiths	1,248 00	647 00	630 00				1,277 00	29 00	
6 Foremen	7,488 00	2,083 00	611 00	612 00	730 00		4,036 00		3,452 00
132 Laborers	68,640 00	24,342 83	20,776 89	18,685 99	16,486 08	9,767 91	90,059 70	21,687 17	
50 Laborers (additional for 6 months)	13,000 00								13,000 00
2 Stable-bosses at $14 per week	1,456 00	742 00		756 00			1,498 00	42 00	
2 Stable-bosses at $12 per week	1,248 00				564 00		564 00		684 00
16 Teamsters	9,709 44	7,668 60					7,668 60		2,040 84
13 Teamsters (for 8 months)	4,160 00								4,160 00
2 Engineers	1,560 00	617 50				40 94	658 44		901 56
Band-master (8 weeks)	192 00						192 00		
25 Musicians (8 weeks)	3,000 00						3,000 00		
11 Boys	3,432 00	1,652 44	597 20		23 00	159 00	2,431 64		1,000 36
3 Toilet-keepers	1.365 00	945 17					945 17		419 83
7 Carters	2,835 00	234 00	1,418 93	39 68	1,965 95	170 28	3,828 84	993 84	
2 Charwomen	312 00	128 00	11 00	13 00	22 00		174 00		138 00
Boy at Washington Monument	130 00								130 00
Caretaker of Maryland Bldg. Druid Hill	200 00	204 05					204 05	4 05	
Cash Balance							17 56	17 56	
Totals	$188,797 44	$68,043 35	$37,337 33	$32,569 43	$30,380 46	$17,257 31	$188,797 44	$32,607 12	$32,607 12

TABLE B.

EXPENSES: PARKS AND SQUARES IN DETAIL.

Showing Payments made on account of "Expenses Parks and Squares" for the year 1903, Itemized to show the distribution on each of the several sub-accounts, among the five Park Districts.

Sub-Accounts Under Item "Expenses—Parks and Squares" in Ordinance of Estimates.	Appropriation.	Druid District.	Patterson District.	Clifton District.	Carroll District.	Riverside District.	Total Payments.	Balances.	
								Dr.	Cr.
Bulbs	$ 3,000 00	$ 1,257 90	$ 628 95	$ 569 05	$ 419 30	$ 119 80	$ 2,995 00		$ 5 00
Building repairs	1,500 00	58 80		15 00	1,662 05	5 25	1,741 10	$ 241 10	
Electric Lighting, exclusive Druid Hill Park	10,000 00	980 55	3,558 32	729 35	3,623 77	989 75	9,881 74		118 26
Erection 35 additional lamps, Druid Hill Park	3,500 00								3,500 00
Maintenance lighting plant and sundries	9,364 66	7,368 15					7,368 15		1 996 51
Feed, work animals	5,100 00	2,983 70	654 05	750 27	648 16	370 68	5,406 86	306 86	
Food, show animals	3 000 00	2,987 15					2,987 15		12 85
Fuel	5,000 00	2,408 67	1,530 63	933 94	1,553 86	449 29	6,876 39	1,876 39	
Gas and oil lighting	9,168 00	989 55	757 67	4,601 92		1,046 90	7,396 04		1,771 96
Gardening supplies	5,000 00	3,371 36	916 96	1,388 32	1,092 75	163 20	6,932 59	1,932 59	
Hardware	600 00	276 01	15 00	60 34	42 74	62 71	456 80		143 20
Horse furniture and stable supplies	1,200 00	45 55	30 40	25 52	86 62	73 45	261 54		938 46
Horseshoeing	950 00	521 00	84 00	236 00	157 00	68 00	1,066 00	116 00	
Insurance	200 00	20 00					20 00		180 00
Lawn and agriculture machinery	1,500 00	182 25	82 40	252 25	133 25	18 00	668 15		831 85
Live stock, horses, etc	800 00			230 00		200 00	430 00		370 00
Paints, glass, putty, etc	2,000 00	881 44	353 03	253 24	183 48	390 00	2,061 19	61 19	
Playgrounds and athletic fields	2,000 00	11 10	495 95	24 90	23 00	35 28	590 23		1,409 77
Rent—toolhouses	200 00	36 00			16 34		52 34		147 66
Repairs—fountains, tools, etc	3,000 00	3,794 08	911 29	930 98	1,197 19	658 15	7,491 69	4,491 69	
Rolling stock	500 00	357 70	14 00			160 00	531 70	31 70	
Supplies—stone, lime, sand, etc	10,000 00	2,019 57	908 53	681 48	1,555 73	2,091 21	7,256 52		2,743 48
Telephones	250 00	53 40	44 40	44 40	44 40	44 40	231 00		19 00
Tools and implements	1,500 00	168 64	152 13	112 85	96 85	113 60	644 07		855 93
Veterinary services	100 00	60 00		69 75		31 25	161 00	61 00	
Music Loan	3,150 00						3,150 00		
Greenspring Avenue Loan	6,000 00						6,000 00		
Interest and Sinking Fund, excess 1902	1,578 63						1,532 39		46 24
Sinking Fund 5 per cent. railroad tax receipts	17,000 00						17,381 30	381 30	
Interest on Patterson Park Loan	8,000 00						8,000 00		
Interest on Clifton Park Loan	31,237 50						31,237 50		
Emergency Fund	2,000 00						1,000 47		999 53
Cash balance							6,589 88	6,589 88	
Totals	$148,398 79	$30,832 57	$11,137 71	$11,909 56	$12,536 49	$7,090 92	$148,398 79	$16,089 70	$16,089 70

Of above payments:

Fixed charges accruing in 1902	$1,532 39		
Fund borrowed for Park Concerts in 1902	3,150 00		
Obligations contracted for maintenance and improvements in 1902	3,807 60		
		8,489 99	
Fixed charges accruing in 1903		62,618 80	
Obligations contracted for maintenance in 1903, and paid in 1903		70,700 12	
			$141,808 91
Cash balance			6,589 88
			$148,398 79

TABLE C.

Showing expenses chargeable to the year 1903, irrespective of payments made during the year itemized to show the distribution on each of the several sub-accounts among the five Park Districts.

Sub-Accounts Under Item "Expenses—Parks and Squares" in Ordinance of Estimates.	Appropriation.	Druid District.	Patterson District.	Clifton District.	Carroll District.	Riverside District.	Totals.	Balance.	
								Dr.	Cr.
Bulbs	$ 3,000 00	$ 1,257 90	$ 628 95	$ 569 05	$ 419 30	$ 119 80	$ 2,995 00		$ 5 00
Building repairs	1,500 00	58 80		15 00	1,662 05	5 25	1,741 10	241 10	
Electric lighting, exclusive Druid Hill Park	10 000 00	933 87	3,294 42	670 50	3,311 38	930 34	9 140 51		859 49
Erection 35 additional lamps Druid Hill Park	3,500 00								3,500 00
Maintenance lighting plant and sundries	9,364 66	7,368 15					7,368 15		1,996 51
Feed, work animals	5,100 00	2,884 70	654 05	750 27	648 16	359 88	5,297 06	197 06	
Food, show animals	3,000 00	2,847 07					2,847 07		152 93
Fuel	5,000 00	2,016 01	1,276 52	905 44	1,260 37	436 09	5,894 43	894 43	
Gas and oil lighting	9,168 00	817 85	664 05	4,134 78		870 06	6,486 74		2,681 26
Gardening supplies	5,000 00	3,265 86	822 96	1,144 43	1,086 35	163 20	6,482 80	1,482 80	
Hardware	600 00	196 30	13 30	43 76	42 74	60 71	356 81		243 19
Horse feed and sundry supplies	1,200 00	45 55	30 40	22 07	86 62	73 45	258 09		941 91
Horseshoeing	950 00	478 00	84 00	236 00	137 00	68 00	1,003 00	53 00	
Insurance	200 00	20 00					20 00		180 00
Lawn and agricultural machinery	1,500 00	182 25	82 40	252 25	133 25	18 00	668 15		831 85
Live stock, horses, etc	800 00			230 00		200 00	430 00		370 00
Paints, glass, putty, etc	2,000 00	881 44	331 18	234 53	183 48	390 00	2,020 63	20 63	
Play grounds and athletic fields	2,000 00	11 10	990 95	24 90	23 00	35 28	1,085 23		914 77
Rent—tool-houses	200 00	28 00			16 34		44 34		155 66
Repairs—fountains, tools, etc	3,000 00	3,745 83	910 68	930 98	1,162 19	658 15	7,407 83	4,407 83	
Rolling stock	500 00	322 70	14 00			160 00	496 70		3 30
Supplies—stone, lime, sand, etc	10,000 00	1,960 83	885 24	681 48	1,548 44	2,089 05	7,165 04		2,834 96
Telephones	250 00	53 40	44 40	44 40	44 40	44 40	231 00		19 00
Tools and implements	1,500 00	168 64	152 13	112 85	96 85	99 50	629 97		870 03
Veterinary services	100 00	60 00		69 75		31 25	161 00	61 00	
Music Loan	3,150 00								3,150 00
Green Spring Avenue Loan	6,000 00						6,000 00		
Interest and Sinking Fund, excess '02	1,678 63								1,578 63
Sinking Fund 5 per cent. railroad tax receipts	17,000 00						17,381 30	381 30	
Interest on Patterson Park Loan	8,000 00						8,000 00		
Interest on Clifton Park Loan	31,237 50						31,237 50		
Emergency Fund	2 000 00	5 00	995 47				1,000 47		999 53
Balance							14,548 87	14,548 87	
Totals	$148,398 79	$29,609 25	$11,875 10	$11,072 44	$11,861 92	$ 6,812 41	$148,398 79	$22,288 02	$22 288 02

REPORT FOR 1904.

FINANCES.

The report of the Secretary-Treasurer for year 1904 accompanies this report. (See p. 69).

It will be noted that the revenue of the parks during the year amounted to $342,622.50, notwithstanding the fact that the revenue from the street railway tax fell off $17,747.23 from what was estimated for 1904, in consequence of the interruption of travel arising from the great fire.

The revenues of the parks are subject to a fixed charge of $61,000.00 per annum for interest on park loans and for sinking funds. This fixed charge will be increased if the new loan of $1,000,000.00 is made for park extension; but it is quite certain that the revenues of the park will increase with the increased growth of the city.

The Board desires here to record its belief that the revenues of the park are sufficient for present purposes, and for proposed extensions and improvements.

But while the fund is adequate it is not excessive, having in view the contemplated increase of expenditures.

The fund must be administered with reasonable economy and caution to meet existing and prospective demands on it. No sinecure positions must be permitted, and salaries must be kept at about the measure fixed by general demand for like services. The temptation to do personal favors with the money of the public must be inflexibly resisted.

The Board is by no means satisfied that everything has yet been done which can be done to bring the administration of the parks to a sound basis, but they believe something has been done, and they will persist in the effort to secure a healthful and sound administration.

The Park Board feels also that it has the right to ask the co-operation of the public in the attempt to administer the parks on business principles. All of the funds appropriated for the maintenance of the parks could be spent economically and honestly in the improvement of a portion of any one of the parks. It all depends on the style and cost of beautification. If the parks are to be extended, the style of improvement for some time must be that which leaves nature to herself, with drives, walks and lakes here and there. The Board must resist the importunacy of local interests which demand elaborate and costly improvements or decorations. So far as the funds permit more elaborate decorations, the location must be determined by the sections of the parks most visited by the public. But, if the policy of park and playground extension is adopted, much elaborate decoration must be postponed.

EMPLOYEES.

There accompanies this report a schedule of the permanent force of the Department, with a statement of the nature and place of the employment and also a statement showing the number of the floating force employed in each month. (See "Table," opposite page 66).

The Board has adopted what seems to it a more satisfactory method of selecting employees than the one formerly existing.

All appointments on the force are made by the general superintendent, subject to objection by the special superintendent under whom they are employed.

The members of the Board have agreed amongst themselves in no way to interfere with the appointments, and have pledged themselves not even to make recommendations to positions. This was deemed essential if the Board was to hold the several superintendents responsible for the work to be done by them.

The temptations which press on those who have to make appointments to public office are:

(1.) To make appointments from motives other than the purpose to secure the most efficient service; and

(2) To unwarrantably increase the number of employees.

The Board does not feel that the present method of appointment is the one best adapted to minimize these temptations, and it hopes at some future time to adopt some better method. So far no better method has been suggested than one like, or analogous to, the methods employed under the civil service regulations, and which now exists in the Police and Fire Departments of the city.

PARKS, SQUARES, ROADS AND MONUMENTS IN CHARGE OF THE PARK DEPARTMENT.

A list is herewith furnished of the parks, squares, roads and monuments under the control and management of the Park Board. (See page 77.)

In some cases the care of so-called squares and of roads should not have been placed under the Department. Some such squares are not, in the proper sense of the term, public squares, they are little more than the yards, and, in cases, the back yards to a number of houses.

In the case of the Greenspring avenue the Park Board has to keep in repair an avenue running several miles outside of the city limits.

NEW IMPROVEMENTS AND MAINTENANCE.

The report of the general superintendent, accompanying this report (See p. 29), will show the work which has been done during the year on new improvements and on repairs and maintenance.

PARK EXTENSION.

A new era of park extension began some twenty years ago in some of the larger cities of the United States. Briefly the purpose of this movement was the beautification of cities by

connecting existing parks by broad parked ways, by the acquisition of new parks and squares, and by making them, as far as practicable, connected parts of the system. The park and parked way was to be brought, as far as could be, to every section of the city.

Cleveland, Chicago, Boston and other cities have already made great progress in the accomplishment of this work. If Baltimore is to take its position in the movement, prompt action is necessary. Already the delay in inaugurating the movement has destroyed a number of park sites, which earlier action could have made available, and others have so enhanced in value that sufficient funds cannot be procured for their purchase.

Impressed with these views the Municipal Art Society secured the services of Olmsted Brothers, landscape architects, to make a comprehensive plan for extending and connecting the parks of Baltimore. This plan was prepared and printed, and is now the property of the Park Board.

To carry it out will ultimately involve an expenditure of some $3,000,000, according to the best procurable estimate.

There was only some $100,000, the remnant of the loan for the Clifton Park purchase, which could be immediately used. By an ordinance of the City Council this has been appropriated for enlarging and extending Wyman Park, and for bringing it into close connection with Druid Hill Park and Homewood Park, the new site of the Johns Hopkins University. The consummation of this is now in sight, and it is believed that the great beauty of this addition to the parks will in a short time do much to convert the public to the possibilities of park extension.

So soon as the necessary purchases of land are made a landscape architect will be employed to prepare a plan and the work of improving this park will be vigorously prosecuted.

At the last session of the State Legislature an Act was passed authorizing the submission to the popular vote of a

loan of $1,000,000 for park extension. The interest and sinking fund on this loan are to be paid out of the Park Fund arising from the street railway tax, and will not add anything to the tax rate to be directly levied by the city. An ordinance, submitting this loan to popular vote at the municipal election in May next, has been prepared, and it is confidently believed it will pass the City Council and be approved by the people.

With this fund the Park Board will prepare a plan for making purchases convenient to all sections of the city, and will submit the plan to the City Council in the fall.

The Board desires to put on record its thanks to Mr. Douglas Gordon for the donation of a parcel of land containing nearly 2½ acres for the extension of Wyman Park.

PLAYGROUNDS.

The public has, in the last few years, shown great interest in athletic sports and a desire to have increased space in the parks devoted to athletics.

The Park Board is in every way in sympathy with this movement, and will do what it can to extend the playgrounds. Indeed, it would like as far as practicable to bring the schoolhouses and parks near together. The Board, however, encounters two difficulties:

1. There are comparatively few places in the parks naturally adapted for athletic fields, and which can be reached readily by car or otherwise, and

2. The preparation of suitable playgrounds requires time and labor.

The Park Board is resolutely meeting the difficulties. There is a fine field for athletic sports at Carroll Park, but an open stream through it has prevented its being put in condition. An appropriation, however, has now been made for putting this stream in a sewer; a playground plan has been prepared by a landscape architect, and as soon as the sewer is put in,

the work of grading and preparing the ground will be pushed.

It is hoped that a very fine playground will be ready in this park by the early summer.

Latrobe Park is being graded and being prepared for a playground in accordance with the plans of a landscape architect, and the same will be done with Swann Park.

Extensive grading is being done at Clifton Park for a fine playground, and this it is hoped will be ready for the coming summer. The Board has a plan for it.

There are as yet no field houses, that is, houses for dressing and bathing, in any of the playgrounds, of the city. The Board has directed plans to be prepared for each of these grounds, and, as the funds of the Board permit, they will be built. This, however, will require time. If the plans of park extension to be voted on in May is approved, the Park Board will be able to secure playgrounds in the vicinity of some at least of the schools and to put them in condition. It may be further remarked that if this plan is adopted, the Park Board will be able to furnish sites for new schoolhouses in immediate contact with the parks and playgrounds; for in making purchases for parks and parkways, it is apparent that portions of lots purchased, not needed for the parks or ways, can be used for school purposes.

The Board desires to express for the public and for itself grateful thanks to Mr. Robert Garrett for the liberal assistance given to athlectic sports in the parks by the donation of gymnastic outfits and the employment at his own charge of athletic instructors in parks.

The Board also records with regret the death during the year of Mr. J. H. Blacklock, who took such an active interest in athletic sports in the parks.

ORGANIZATION OF THE PARK BOARD.

The Park Board as now constituted consists of five members, all of whom vacate office on the first day of Octo-

ber next succeeding the election of Mayor, occurring in May of each fourth year. The official life of the present Board will terminate October 1, 1907. There are many objections to this arrangement. The administration of the parks and their improvement require a continuous policy, and to accomplish this, the Board should have a continuous existence. This can be accomplished by having the tenure of one member of the Board terminate on the first day of October in each year. The Legislature should be requested at its next session to make this change.

LAWS AND ORDINANCES RELATING TO THE PARKS.

There is printed with this report for convenience of reference the several laws and ordinances relating to the general administration of the parks. (See p. 111).

PARK POLICE.

The law places the preservation of law and order within the City of Baltimore on the Board of Police Commissioners, and it is their duty to enfore the laws and regulations of the parks and to protect the property in the parks.

But, at the time of the purchase of Druid Hill Park, it was not within the city, and in order to protect it and other parks outside the city limits, the Legislature empowered the Park Board to employ watchmen. Out of this grew the employment by the Park Board of what is called the Park Police.

When the city limits were extended so as to take in Druid Hill and Clifton Parks, the Park Board could, and probably should have dismissed this Park Police, and handed over the policing of the parks to the Police Commissioners. This, however, was not done.

When the present Board entered into office it addressed certain inquiries on this subject to the City Solicitor, and was informed—

(1) That the Park Board was not bound to police the parks and could turn the matter over to the Police Board,

and (2) that, while this was so, the Park Board had the right to employ watchmen and pay them.

After consultation with the then Police Board, and in view of their urgent representation that the police force of the city was inadequate to this additional burden, the Park Board determined to continue the Park Police. This it was the more willing to do as a number of the Park police had grown old in the service, and it might be a hardship to displace them. The whole arrangement, however, is an undesirable one. Neither the Park Board nor the park superintendents have the time or the powers for selecting, organizing and disciplining an efficient police force.

The present Park Police consists largely of old men unequal to the duties and discipline of regular police service. A recent attempt to introduce a somewhat more rigid discipline has been met with complaints, and both the pay and duty hours of the men have been made a subject of criticism in the columns of the newspapers.

It is clear that this matter must have an early adjustment, and that the policing of the parks must be put where it belongs; that is, on the Police Board.

It is suggested as a method of settlement that the more faithful and worthy members of the Park Police be employed as watchmen at certain designated places, and the general policing of the parks be committed to the Police Board. As these watchmen so retained drop out, the whole matter would by degrees pass into the hands of the Police Board.

The cost of policing the parks paid by the Park Board in 1904 was $26,110.

In closing, the Board desires to express its obligations to the office staff of the Board, and to the general superintendent and the district superintendents, and employes generally for the manner in which they have discharged their duties during the year. Respectfully,

BOARD OF PARK COMMISSIONERS,

RICHARD M. VENABLE, *President.*

BALTIMORE, February, 12, 1905.

MAJOR RICHARD M. VENABLE,

President Board of Park Commissioners.

DEAR SIR: In accordance with the request of our Board that I append to the Annual Report a statement of my opinion relative to the proposed increase in the interest and sinking fund charges, which would result in the event of the approval by the public of the One Million Dollar Park Extension Loan, I desire to state that I am heartily in favor of the extension of our park system, and shall gladly favor the same when our finances will (beyond a reasonable doubt) bear the burden of taking care of a loan of that magnitude without neglecting the development of the existing parks.

Our revenue derived from the railway park tax, amounting to between $365,000 and $375,000, is apparently sufficient to meet our fixed charges and the expense of maintaining our park system at the present time. While we had a surplus last year of $31,781.98, double that amount could have been expended in the development of Wyman's, Gwynn's Falls, Latrobe and Swann Parks.

To what extent our financial condition will be affected by assuming the additional demand which the increase in our fixed charges by the proposed loan will place upon us depends, of course, upon the extent to which the undeveloped parks already acquired are to be developed. If they are to be left in their present condition, there will be sufficient money, but if they are to be extensively and fully developed the present charges for interest and sinking fund are as heavy as can be borne.

Let me add that I believe it is the intention of our Board to fully develop the parks now under our control, and it is the desire of the public that we do. If we could devise a plan to raise sufficient money to link our parks together by a boulevard it would be about all our financial condition would stand, in my judgment, without neglecting to any material degree the parks already acquired.

Yours very truly,

ED. D. BOOZ.

APPENDIX A

Report of the General Superintendent.

Appendix A.

Report of the General Superintendent.

The Honorable Board of
Park Commissioners, Baltimore, Md.

GENTLEMEN :—I have the honor to submit the following report for the year 1904:

On assuming the office of General Superintendent on January 1, 1904, I found considerable demoralization of the force of the Department, owing to the lack of a responsible central authority, thoroughly conversant with the needs of the Department, and also owing to a lack of responsibility and authority in the various district superintendents. A sort of rivalry existed between the latter, by no means conducive to the best interests of the Department as a whole. In reality there were five different park systems, with the consequent extravagance. In addition to this, was also the lack on the part of the district superintendents, of the necessary authority to properly control the employees. These defects, with your approval, were at once remedied.

The district superintendents were directed to thereafter consider their district as a fraction of a general system, in the success of which all should be interested. They were told that they would be given all authority necessary for the proper performance of their duties in administering the affairs of their districts, and that they would be held personally accountable for the results; that no purchases of labor or material would be made, except upon the personal responsibility of the party making them, until properly ordered by this office. A system of requisitions and receipts for material, etc., was established. All employees were to be appointed

from this office, subject to the disapproval of the district superintendents, and all discharges were to be recommended by them The superintendents were to be held responsible for the proper performance by the employees of their duties. The principal duty of a superintendent was to be the efficient and economical maintenance of his district in first-class condition. No changes in the parks and squares would be made, beyond the necessary maintenance of the same, except upon orders from this office.

Acting on this system, it has been found that the efficiency of the park forces has been greatly increased, and the expenses of maintenance greatly diminished. It has been possible to consider the needs of the system as a whole, and to avoid unnecessary purchases at inadvisable expense.

The system adopted has enabled us in purchasing supplies to secure them in larger quantities at probably reduced rates; it has enabled the securing of competition in almost every case of purchase; it has enabled the Secretary to accurately account at any and all times for the receipts and expenditures of this Department.

Weekly reports from the district superintendents have been required with a careful account of all labor and material used in the performance of a distinct kind of work. The General Superintendent has reported the work done, and such other matters as came up, to the Board at its regular meetings for their information and approval or instructions.

Incidental to the other details of the new system, arrangements have been made for properly indexing the various records of the general offices and for completing these records. This work has progressed as rapidly as circumstances would permit without the addition of extra clerks for this work.

A complete record of all work done in the Department this year has been kept in detail, and the records of the office are now, for the year 1904 at least, in good condition. As an instance of the value of the system of recording established, I

desire to call your attention to the following: For the period previous to August 1, 1901, the records of the office are very incomplete. From that date to January 1, 1904, such records and reports as were received have been carefully filed, but before January 1, 1904, no regular sets of reports as regards the efficiency of the lights in the various parks and squares were received. I have found, since requiring complete reports on this subject, that this Department had paid since September 13, 1900, for various lights in some of the squares, the price of an all-night light for a light which burned only until midnight; that it had also paid, in some cases, bills of two separate companies for the same service, and, also through not being properly advised of a contract which had been made by another department of the city, but which affected this Department, had overpaid another company for services rendered. As soon as these facts could be evidenced, I took these matters up with the various companies, and have secured the return of a portion of this amount, and placed this Department in a position to demand the return of the balance of the money so overpaid, amounting in all to $11,353.11.

The discontinuance of the growing, by this Department, of cut-flowers, useless for out door purposes, has enabled us to do away entirely with two old propagating houses in the Department and the expense connected therewith, and to use the space occupied by these buildings for improvements in the appearance of the parks. I do not find that the lack of these flowers in the Department has caused any adverse criticism from the public.

Particular attention has been paid this year to the demands on the parks for facilities for athletics and other playgrounds.

In the work of developing the parks of Baltimore, apparently but little intelligent consideration has thus far been shown as regards the provisions for opportunities for outdoor sports.

As far as the layouts of the interior squares of the city and Druid Hill Park are concerned, they may be considered to be

completed, and in them, even in Druid Hill Park, sufficient provision has not been made for playgrounds. Neither is it possible to make this provision now within their existing limits without an unwarranted sacrifice of their other desirable features.

It has been felt, therefore, not only necessary in these completed parks and squares to recommend that your Board restrict their use for playgrounds to such limits as will not interfere with the other uses of them, for which their design seems better fitted, but also to recommend that the development of the present athletic facilities in Druid Hill Park be postponed until an area can be secured, outside of the present park limits, convenient to reach from the city, and where the various playgrounds can be concentrated with the necessary buildings, without detriment to the park proper, in a manner to fully provide for a growing demand for such facilities.

In Patterson Park the present location of the playgrounds seems to be more nearly in accord with a good design for the park as a whole, with the possible exception of the children's playground. I would recommend, however, that, as soon as the demands for the use of this seem to warrant a larger area than the present small one, these playgrounds be moved to a location nearer the present easterly boundary of the park, where the possibility of their development might be provided for with less damage to the park proper. As regards the other playgrounds in the park, their location seems fairly well chosen, though some space is wasted. Considering, however, the improbability of their being relocated in the near future, such improvements and additions have been made as circumstances demanded or permitted, and such slight changes have been ordered as will increase their availability.

Clifton and Carroll Parks have been considered as undeveloped parks, and while every effort has been made to maintain the present playgrounds in good, useful condition, it was felt unwise to recommend much expense for improve-

ment in these until their final location had been decided upon. To assist in this decision, the landscape architect was consulted, and, as expected, he recommended other localities in each park than those now occupied by these grounds. His recommendations having been approved by your Board, steps have been taken toward the work. In Carroll Park a survey was necessary before detailed plans could be prepared for us to work by, and this has been made. In Clifton Park work could be and was actually commenced on the grading necessary.

In the development of the new "Swann" and "Latrobe" Parks in South Baltimore, before any work was done, detail plans for the same were secured from the landscape architect and approved by your Board. These plans in each of these parks gave special consideration to the demands of this section of the city for playgrounds. The approved plans practically devote the whole of each park for this purpose, and the whole space in each park is utilized to the utmost.

Heretofore it has been customary for this Department to clean the ice and snow from the pavements outside of, but adjacent to, the parks and squares, and in some cases to even lay or repair these pavements. On taking the matter up through the Law Department, however, it was found that the responsibility for these pavements outside of the park limits did not belong to this Department, but to the Street Cleaning Department and the City Engineer's Department. Since this conclusion was reached, this Department has refrained from interfering with these outside pavements.

In at least four of the larger parks, nurseries are maintained for the propagation of trees and shrubs. In all of these parks, except Clifton Park, the space occupied by these nurseries is either unsuited in its conditions, or can badly be spared for such use. On my recommendation, your Board has approved the gradual abolishing of all nurseries except at Clifton Park, and the transfer of the unused nursery stock to that place for the establishment of a departmental nursery there.

The trees of the Department have been sadly neglected in the past. An effort has been made to atone for this neglect, though it is impossible now to entirely correct it, by careful attention this year. The trees of the squares have been carefully pruned where necessary. The advantage to be derived from removing the lower limbs to a height of about eight feet, in the interior squares, by the increased effectiveness of the lights in these squares after dark and the improvement in the grass, also possible can readily be appreciated. So far as possible this year, this work has been done, and it is proposed to follow it up until completed. The work of removing dead limbs from the trees and dead or dying trees from the woods and other places, in order to give room for new growths and to remove danger to visitors, is progressing. Such new trees have been set out as possible under the circumstances.

In this connection I desire to call your attention to a matter, which, though, perhaps, not entirely in your province at the present time, seems worthy of your consideration and possibly your action.

The trees in the various streets in the city are in a shameful condition. The Law Department has denied the right to this Board to plant trees along the streets of the city outside of the parks and squares, and probably would also say that this Department had no authority to trim, care for, or in any way expend on these street trees its park funds. Unquestionably, however, a great improvement in them, and consequently in the city's appearance, might be had by subjecting them to some intelligent control. The Park Department is far more likely to have in its employ a person capable of understanding their needs than any other city department, and the work of caring for the street trees and the park trees might be done by one and the same force advantageously. The objections of the Law Department to the work being done by this Department might be removed should the city government appropriate from the general tax levy a sum

sufficient to cover the cost of properly caring for the street trees and place the same to the credit of the Park Department, in addition to the usual park funds.

Formerly an excessive number of bedding plants was annually propagated by the various superintendents during the winter, and, after planting the beds in the parks and squares in the spring, the excess was distributed among persons applying for the same. This year instructions have been issued for the submission by each district superintendent to this office of plans for the spring planting. After these plans have been approved, the propagation of bedding plants has been ordered to correspond with the approved lists, which will result in greater economy at least. The number of beds to be annually planted has also been reduced somewhat by sodding over such beds as were from their shady location or other reasons unsuitable for planting, with the idea of improving the general appearance of the Department, and by planting still other beds with hardy shrubbery. The number of plants under propagation for the beds next spring is 333,800, against 724,450 last year.

An effort has been made to increase the stock of hardy flowering plants in the Department, and to gradually decrease the number of less serviceable varieties, with the hope of reducing further the annual cost of maintenance without in the least sacrificing appearances.

In the fall of 1903 the sum of $3,013 was spent in the purchase of bulbs for the spring display to the number of 269,775. None had been saved from the stock of the year before.

Believing it entirely practicable to use the far greater number of the bulbs planted in any year a second time at least (as is continually done in Boston, for instance), instructions were issued to carefully preserve as many as possible of these bulbs when they were dug up last spring, with the result that the purchase of bulbs this fall was cut down to $1.059.12, and yet more bulbs than ever were on hand. It would have been possible

to make a still greater saving had not many of the bulbs bought in 1903 been kinds fit only for forcing in the conservatories. The total number of bulbs planted in 1904 was 286,630—practically all in outdoor beds.

Considerable work in the way of surveying, etc., being necessary in connection with the development of the new parks, and the improvement of the others, efforts were made to provide for this through the Topographical Survey, as it was recognized that their office had already accumulated considerable information that would be of value in connection with this work. The fire in the city, however, so greatly increased the labors of the Survey that it was impossible for them to furnish the assistance required for the Park Department, and a surveying corps was consequently organized for park work. Mr. P. C. Kennedy, formerly with the Topographical Survey, was placed at the head of it, and Major Shirley, Topographical Engineer, kindly provided space in his offices for our work, and has placed the information of his office at our disposal and otherwise greatly assisted this Department.

A large amount of work has been done by this corps, although it never consisted of more than four men. Several important surveys have been made with a number of plans of park property, and a large amount of work staked out. A complete set of plans of the property of this Department is being made up and collected. Heretofore such plans as existed were scattered and incomplete.

Early in the Spring it was decided by your Board to provide for public concerts in the parks during the summer. Professor C. Dorsey Waters was engaged as Bandmaster, and on his recommendation twenty-five men were engaged as musicians. This band gave a series of concerts, weather permitting, regularly in Druid Hill Park, Sundays and Thursdays; in Clifton Park, Fridays; in Patterson Park, Mondays and Saturdays; in Carroll Park, Wednesdays; in Federal

Hill and Riverside Parks, Tuesdays, alternating, from June to September. In all, eighty-nine concerts were given and were generally largely attended. Professor Waters was given permission to take the band to Cincinnatti on July 16–20, where they competed in a band contest and won the first prize of $500 in the class in which they were entered.

The work of policing the parks and squares of the city is at present divided between the Board of Police Commissioners and this Department. The Police Commissioners have detailed a certain number of men for regular work in the parks. Where this number of men was felt by the Park Commissioners to be insufficient for properly protecting park property, the additional men necessary, in the opinion of this Board, have been employed by them. The minimum number of policemen employed by this Department is now as follows:

Druid Hill	17	Patterson	7
Wyman	1	Riverside	2
Clifton	6	Federal Hill	1
Collington	1	Carroll	3
Harlem	1		

This number is increased during the summer season, and on such special occasions as found necessary.

The present pay of the Park officers is $1.50 per day. Their uniforms are furnished by the Department, and each officer with a satisfactory record is allowed twelve days vacation with full pay each year.

The cost of this Department of policing the parks and squares during 1904 was about $26,110 under the present system.

The total number of arrests made in this Department during the year was 122, divided as follows:

Southern District	24	Druid Hill District	53
Clifton District	1	Patterson District	44

The total amount of fines collected was $271.00.

In the statement of the Secretary-Treasurer, (Appendix "B") for the year 1904, I desire to call your attention to the following:

You will note that with the appropriation for the year of...		$379,000 00
And the sum actually paid out for expenses of.....		329,470 79
The actual balance of the appropriation is.....		$49,529 21

But to this should be added as follows:

Bills 1904 to be collected.....	$4,141 60*	
Less bills 1904 to be paid.....	2,025 86	2,115 74
		$51,644 95
At the end of the year 1903 the balance was (net).....		13,063 24

In the sum actually paid out for "expenses" as above were:

Maintenance, (actual).....	$208,412 38	
Fixed charges (Sinking Fund and Interest)....	59,598 15	
Improvements.....	61,460 26	
		$329,470 79

The amount for maintenance this year was larger than it should have been, had the attention demanded by the condition of the various items in the Department been annually accorded them heretofore.

I estimate that next year this expense should fall considably below $200,000. In the above figures for maintenance are included payment of bills amounting to $5,036.03, carried over from 1903.†

The best system and organization for maintaining and improving the parks of Baltimore will be a matter of development rather than of inauguration. While I feel that much improvement in the organization and system has occurred during the past year, I beg to state my belief that still further improvement may be expected as a better acquaintance between the individuals employed and with the work to be done arrives.

*Part of over-payments, resulting from contracts made outside of the Deparment.
†Entries not authorized until 1904,

In conclusion, I desire to express my cordial appreciation of the assistance accorded me by the other Departments of the City Government, and my hearty thanks to the officials and men of this Department, without whose sincere efforts, whatever good results may have been obtained, would not have been possible.

Very respectfully,

WALTER WILSON CROSBY, C. E.,

General Superintendent.

Detailed Report of Work Done in the Different Park Districts for the Year 1904.

CLIFTON DISTRICT.

MAINTENANCE.

Clifton Park itself must be considered entirely undeveloped as a park as yet. Nothing has been done to improve the property in accordance with any defined plan for a public park, and, in the absence of such, work in the park this year has been almost entirely in the nature of simply keeping the appearances neat and of repairing such damage as has occurred and been neglected in the past, and as further occurred from time to time. The lawns and fields in the park have been kept mowed ; the washed places filled up with soil and sodded as found necessary; such manure as it has been possible to get has been applied, and a considerable quantity of street sweepings has been received and stored in the park for use as soon as fit.

The nursery in Clifton Park has been neglected for several years, and trees, which should have been moved before, had been allowed to remain too long. An effort has been made to get these out this year and a large number have been moved, including all of the oldest trees.

As before stated, no definite plan for improving Clifton Park for public use has yet been adopted, and consequently it has not been felt wise to attempt much in this line, especially in the case of any large work, that might be affected by the future adoption of such a plan. Such trees as have died and such old stumps as remained in the fields and lawns of the park have been removed. Such young trees as de-

manded removal from the nursery have been set out where it was felt their location might be permanent. A list of these is as follows :

	Shrubs.
Japanese maple	3
Amorpha (false indigo)	4
Berberry	11
Buddleia	1
Japanese weeping cherry	6
Red bud	8
Dogwood	20
Purple hazel	11
Hawthorn	13
Deutzia	124
Exochorda (pearl bush)	2
Forsythia	51
Althea	46
Hydrangea	90
Privet	110
Dwarf horse chestnut	1
Mock orange	15
Purple plum	20
Rhodotypus	21
Spirea	18
Lilac	8
Japanese snowball	1
Total	584

	Evergeens.
Spruce	17
Japanese cedar	6
Pine	32
Total	55

	Trees.
Horse chestnut	39
Maple	21
Birch	30
Beech	26
Ash	21
Paulownia	1
Mountain ash	9

Poplar	34
Oak	55
Japan ginko	7
Willows	17
Linden	12
Elm	24
Total	296

The other trees in the Department have been given attention and carefully pruned, where necessary, especially in the squares, to allow a better better distribution of the light and improvement in the lawns.

A set of platform scales has been purchased and installed in a convenient location in the park for the purpose of checking the delivery of coal, feed and other material.

The old hay barrack was destroyed by fire during the summer; the cause of the fire was unknown, but it is presumed that it occurred from a match or a lighted cigarette being thrown into the hay. An open wooden barrack is entirely unsuitable for park purposes, as stored hay should be fully protected from the possibility of such accidents.

The walks and roads in Clifton Park have been attended to as found necessary and put generally in good condition.

The greenhouses in Clifton Park have been repaired and painted.

The interior of the Washington Monument in Mount Vernon Square was in bad shape on account of leaks in the roof of the base and general lack of care and maintenance. A contract was made early in the year for its renovation and the work completed. The old gas lights in the monument were placed vertically in the shaft along the line of a pipe running up one side. This arrangement left some dangerous dark places on the stairway, and, consequently, arrangements were made for running a series of electric lights spirally around the shaft, so that there was no point on the stairway from which at least one of these lights was not

plainly visible. A number of efforts have been made to secure the current for these lights, but so far, without success. This is to be regretted, for it is felt that a different arrangement of lights is badly needed in the shaft. This monument is one of the attractions of Baltimore and is visited by a large number of people, especially by strangers. An inviting interior in the monument will do a great deal toward giving strangers a good opinion of the city. The squares around the monument are in a very fair condition and every effort has been made to keep them especially presentable. Some repairs have been made to the cement walks where necessary.

Some thirteen wires had been stretched across the north square by telephone and telegraph companies without authority. These wires not only disfigured the square, but were injuring the trees through which they ran. By direction of the Board these wires were ordered removed, and all but five have been taken down. These remaining five were moved up so as not to interfere with the tree growth at present, and have been allowed to remain in their new position for a short time longer, owing to their temporary necessity.

The Howard statue at the north end of Mount Vernon Place has been completed, and, on the advice of the Landscape Architect, the two large box trees, formerly on either side of the statue, have been moved back close to the two others on either side of the square. In place of these large irregular boxes, a smaller and more formal box has been planted on either side of the statue, much improving the effect.

The old Hopkins Mansion at Clifton was found to be greatly in need of repairs, and a contract was made for the thorough renovation of the outside of the building and the work completed. The decorations of the interior are of an unsual style, and are worthy of preservation. Now that the leaks have been repaired the life of these decorations is pro-

longed, but additional means might be taken to extend it. At present the building is practically unused except for the rear wing, which is occupied by one of the employees, and one of the rooms on the south side of the lower floor which is occupied for a Women's Retiring Room.

Such other building repairs have been made as has been found necessary.

The signs in the district have been repainted, which was badly needed.

The gas lights on the gate posts of the Mount Royal Sunken Gardens have been relighted at night.

Two years ago the hedge along Mount Royal avenue, between Charles and Calvert streets, was removed, but that between Calvert street and Guilford avenue was left. This portion has since died in part, and the removal of the whole of the hedge has been completed to make all the squares correspond with each other. The hedge along the top of the wall west of St. Paul street and on the north side of the garden was of different material from the corresponding hedges east of St. Paul street, and was unsuited for the locality. The same has recently been removed, and a hedge of similar material and shape to the hedges in similar localities east of St. Paul street has been ordered planted in its place.

The outdoor display of flowers at Clifton Park the past summer was one well worth going to see, and one of which the superintendent may well have been proud. It is to be regretted that its location was such as to cause it to escape the attention of the majority of park vistors, and it is to be hoped that more prominent locations in the Department may in the near future be occupied by similar displays.

IMPROVEMENT.

After consultation with the Landscape Architect, a location for the athletic grounds in the southern portion of Clifton Park was decided upon, and the grading of this plan has been begun and carried on as fast as circumstances would permit.

In connection with this work, the construction of two sewers through this portion of the park, discharging into the culvert under Washington street, has been found necessary. The construction of the more northerly one of these two sewers plainly belonged to this Department as it was solely for the surface drainage of the park property, and accordingly a twenty-four inch pipe was laid by this Department. The other sewer was made necessary by the filling in of an old run coming into the park from the west and running easterly to the culvert before mentioned. This run carried sewage discharged into this natural water course by the adjacent property owners. In the opinion of your General Superintendent, the construction of this sewer plainly belonged to the department of the city accustomed to provide such improvements for the property owners and inhabitants of the city itself. An effort was made by your Board to secure the necessary amount for this purpose included in the Ordinance of Estimates for the City Engineer's Department for the year 1905. It being, however, finally omitted by the Board of Estimates, your Board has directed the construction of this sewer out of the Park Funds, and it is expected that this work will be completed early in the spring of 1905. The estimated cost is $1,500. With the completion of this sewer it will be possible to finish the grading of this portion of the park for athletic purposes.

The gymnasium apparatus presented to Clifton Park by Mr. Robert Garrett has been received by the park, and is now stored there. Its erection has been deferred on account of the non-completion of the grading of its site, but it is hoped that it may be ready for use by the opening of the next outdoor gymnasium season.

One tennis court, work on which was started in 1903, was completed for use at the beginning of the tennis season of 1904.

DRUID HILL DISTRICT.

MAINTENANCE.

A number of buildings in this district have been repaired as was necessary, and they are now generally in good condition. All the buildings needing it were painted.

The stock of tools, carts, wagons, etc., was overhauled during the winter and placed in serviceable condition.

A large amount of repairs to the roads, walks and bridle paths has been made, and they are now generally in fair condition. Some of the roads will require resurfacing in the near future. The road around the lake in Druid Hill Park may be particularly mentioned. The necessity of minor repairs has so engrossed the attention of the road force this year that it has, as yet, been impossible to do more toward this important work than the completion of the necessary plans for it. It is to be hoped that this work may be started early in the spring, and completed as early as possible.

Green Spring avenue has been cared for as necessary and possible this year. The grass and weeds along the sides have been kept cut, and such repairs made to culverts, bridges, gutters and the stoned roadway as demanded. The repairs made to the travelled portion of this avenue in 1902 and 1903, while resulting in a considerable improvement over the former condition of the roadway, were, at the best, more in the nature of a surfacing or "veneering" than a permanent improvement. This is beginning already to show by the "ravelling" of the stone surface in some places, and the cutting through and rutting of it in others. It will be but a few years before the reconstruction of this roadway will be imperative. When this work is then done it should be carried on in a thorough modern manner, so that the constant repetition of this work may be avoided.

By direction of the Board the gate closed by the previous Board, and known as "Brown's Gate," has been reopened.

During the dry season such roads in Druid Hill Park as appeared to demand it, were sprinkled more or less regularly, it is believed with fairly satisfactory results. The performance of this work required from eight to ten horses daily. In connection with this work arrangements were made with the Street Cleaning Commissioner for the sprinkling of Park Heights avenue, from Pimlico gate to the city limits, and of Eutaw Place, from the Park gate to Whitelock street. This Department secured a quantity of street sweepings for use as manure in return for the expense incidental to this work.

Especial attention has been paid to the lawns and fields in the district. These have been carefully mowed throughout the year, and fertilized, where necessary, as time and other circumstances would permit. The fields were found to be in an extremely run down condition. Considerable effort has been made to restore these so that not only will their appearance be improved, but also that such quantities of hay might be gathered from them as should be expected from their area, and the Department made, to this extent, self-supporting. This should and can be done very shortly. In my opinion, this Department, even with its large stock of animals, should not be obliged to go into the market for hay. The amount of hay consumed by this Department in 1904 was 110.79 tons. Of this quantity 87 tons were raised in the parks in 1904.

The large field surrounding the Rogers burying ground and north of the fish hatchery was plowed up in the spring, fertilized and seeded to cowpeas. Then at a proper time these were plowed under and the fields seeded to timothy, with satisfactory results so far. The field to the southwest of the high-service reservoir and the field north of the old "Dummy Station" and west of the fish hatchery have been plowed up this fall and seeded to crimson clover. It is intended to turn this crimson clover under at the proper time and reseed these fields with mixed grass.

The field east of the Pimlico drive and northwest of the "Dummy Station," and the field west of the Pimlico drive, between the road to Brown's gate and the Pimlico entrance, have been thoroughly limed, and it is hoped that the improvement in the grass in these fields will avoid the necessity of plowing them up at present.

Such manure as was on hand and fit for use last winter was spread on the various lawns as far as it would go. Lack of proper provision for a sufficient quantity of manure, however, prevented some of the lawns receiving the dressing needed. An attempt has been made this year to accumulate sufficient manure in the form of stable manure, street sweepings, etc., to give all the lawns at least in the district the dressing needed. It has not been possible, however, to secure all this material that could be used to advantage. In Druid Hill Park alone, far more manure is needed than it has been possible to secure. A more liberal use of this material would very easily pay for itself, not only in appearance, but also in commercial results.

Owing to the fact that in the Fall of 1903, the second mowing of the fields was omitted and the fallen leaves were not raked up before the winter season, the work of cleaning the park in the spring was rendered extremely difficult and expensive. This year the grass was mowed a second time as late in the season as was deemed advisable, and the bulk of the leaves cleaned up before the snow fell. The cost of cleaning the park next spring will be, therefore, considerably reduced.

Considering the inappropriate, and probably temporary location of the several ball fields and other playgrounds in Druid Hill Park, it has not seemed advisable to expend more on them at present than the amount required to place them in serviceable condition within their present limits, and to improve their appearance as much as possible under the circumstances. Every effort has been made to grow a good sod on

the foot ball field and to keep the same in first-class condition. The base ball fields have been sodded, the wash and wear repaired by additional soil, and the grass kept carefully mowed. The children's playground has been kept in as good condition as possible, but considerable soil and seeding is needed here. Such soil as it has been possible to get for this purpose has been hauled, and it is the intention to continue with this as soon as the weather opens. Both the sod and "skinned" tennis courts have been kept in good condition. The removal of the sod from nine of the former, after the closing of the tennis season, will, it is felt, be appreciated another season.

An effort has been made to improve the skating facilities by providing for the removal of the spring water from the Boat Lake on the approach of cold weather, so that the lake may freeze earlier in the season than otherwise. This has been accomplished by laying a pipe from "Edmund's Well" across the lake and through the embankment on the south side to an outlet. The spring water may be diverted into this pipe at pleasure by proper valves. The work is not quite completed, owing to the connection of this pipe with the spring supplying "Edmund's Well" not being finished.

The trees of the district have been carefully watched and attended to as far as has been possible. Such trees as have died in the squares have been replaced where deemed advisable by new trees, and all the trees in the squares have been pruned. The work of removing the lower limbs of the trees in the squares where necessary, and possible, has been carried on as fast as advisable, it is believed with a great resulting improvement in the appearance of the squares. This trimming also, while not interfering with the desired shade in the squares, materially aids in the work of keeping the grass in good condition. The woods in Druid Hill Park have been carefully gone over, and, as far as time has permitted, the dead branches have been pruned

out. The dead trees have also been marked, and are being removed as fast as possible. These numbered in Druid Hill Park nearly 800. Wood obtained from such sources is cut into cord lengths and sold.

Early in the year the Water Department notified this Department that the space occupied by our electric lighting plant in the pumping station in Druid Hill Park was desired by them for their own uses, and that it would be necessary for us to make other arrangements for space, if we desired to operate this plant. Your Board, deeming, it inadvisable to incur the expense of erecting a suitable building for this plant at this time, directed the execution of a contract with some concern for the lighting of Druid Hill Park, and the storage of that part of our plant, which would be unused in such an event, temporarily. Under these instructions bids were asked and a contract executed through the Board of Awards with the United Electric Light and Power Company for the lighting of Druid Hill Park, at what seemed to be fairly reasonable figures. Since the execution of this contract some additional lights have been placed in the park at the following points :

3 16-candle power incandescents in each of the ten shelters.

1 16-candle power incandescent in Dummy Station.

12 16 candle power incandescents in stable.

2 half-night arcs at Boat Lake.

1 half-night arc at Island House.

1 all-night arc between Green Spring Gate and High-Service Reservoir on Green Spring road.

1 half-night arc at High-Service Spring on Dell road.

A number of arc lights have been placed on an all-night circuit, and the total number of lights in the park is as follows :

36 all-night arcs.

29 half-night arcs.

20 incandescents (16 and 32-candle power).

43 incandescents (50-candle power).

The condition of the numerous signs in the district was very bad and the apparent demand for their early renovation, and the haste demanded in the execution of this work, while improving the appearance of the same, has revealed the fact that a general overhauling of the signs and their phraseology would be beneficial. It is the intention, at the first opportunity, to complete this work.

The various fountains in the district have been thoroughly overhauled and repaired, and painted where necessary. Last winter the water was shut off at the approach of cold weather and the basins drained. Lack of care in draining the fountain pipes resulted in a large expense for repairing frozen pipes being necessary, and the draining of the basins gave the frost an opportunity to, in a number of cases, render the basins leaky. With a view to avoiding this expense next spring, the experiment will be tried of allowing the water to remain in the basins and to flow constantly through the pipes.

The various ponds in Druid Hill Park, with the exception of the reservoirs controlled by the Water Department, have been emptied and cleaned of the mud and sand in the bottom. The cleaning of the boat lake has not been finished owing to the desire to avoid, as far as possible, a serious interruption to the skating. This work will be completed next fall. The soil so obtained has been used in restoring the surfaces in the Park, which had been denuded from various causes. In addition to this, a large amount of soil has been purchased for this purpose. This washing and wearing off of the surface soil has been going on for years, and apparently but little effort made to prevent the same, or restore the surface. The appearance of the park suffers severly from this neglect, and continued attention to this matter cannot be too strongly recommended.

The Zoo in Druid Hill Park has been given considerable attention with a view to its betterment. Many of the present arrangements are rather in the nature of makeshifts. The

appearance, however, has been improved as far as possible by repairing, painting and tinning, and rebuilding the walks, etc. The yard around the camel house has been regraded, to avoid the previous muddy condition, and surfaced with fine stone. Considerable soil was obtained during this work, which was used as heretofore described. One of the bears has been transferred to the old brick bear pit, and the gray wolves taken from the cage they occupied, which was too small for them, and placed in the empty bear cage, which was far more suitable. A young camel was born in January, and the head animal keeper, although experiencing some difficulty, has succeeded in raising the animal. For a complete list of animals in Zoo, with the decreases and additions in the year 1904, reference to Appendix is invited.

IMPROVEMENTS.

On recommendation of the General Superintendent, the Board, early in the year, decided to improve the appearance of the Mount Royal entrance to Druid Hill Park by the addition of shrubbery. Plans for the same were accordingly obtained from the Landscape Architect, and, as soon as received this work was begun. Owing to the late date of its commencement it has not been possible to finish the same, but the shrub beds are all prepared, with the exception of those between Lennox street and North avenue along the westerly edge of the park, and the bulk of the shrubs are planted. It is believed that when fully developed these shrub beds will materially add to the appearance of the Mt. Royal avenue and Madison avenue entrances.

A petition for the removal of the park stables from a location near the Druid Hill avenue entrance to a less offensive location in the park, having been considered and recommended, the same was ordered. The old barn was torn down and rebuilt on a new location near the sheepfold, to form the fourth side of a rectangle, of which the wagon sheds form the other sides. The work was done in a thorough manner, and the

result is a great improvement of the stabling facilities as well as in the Druid Hill avenue and Fulton avenue entrances to Druid Hill Park. In the re-erection of the stable a number of improvements were made, such as increasing the number of stalls, lighting the stable with electricity, and in a great number of small details. The rectangular space enclosed by the sheds and stable has been provided with proper drainage and covered with cinders, furnishing a dry sheltered place for use in connection with the stables. A new road was opened and built, running from the stable to the road leading from the repair shop to the Latrobe Pavillion. With the concentration of the stabling and storage near the sheepfold, it was deemed advisable to provide for a means of fire protection, and consequently a fire hydrant was placed in the vicinity.

Foot traffic, entering Druid Hill Park at the terminus of McCulloh street and going northerly, had worn an irregular path across the lawn. The apparent impossibility of otherwise maintaining a satisfactory lawn at this point seemed to require the construction of a permanent path here, and this was done. A similar condition as regards a foot path across the children's play ground, from the Druid Hill avenue entrance to the foot of the Mall, resulted in a suitable path being constructed between these two points, and it is believed the results will amply justify the expenditures. Another such condition near Edmunds' Well has resulted in the construction of new paths leading from the west toward the Zoo and leading west toward the Boat Lake, and a flight of rustic steps was built of logs, from the well toward Number Ten Grove. A new path has also been built around the camel house enclosure and in front of the cages, and the drainage of the path, running behind the bear pits and down past the elk enclosure, enlarged and improved to prevent the continual washing out, which formerly occurred after each heavy rain. Two new paths have also been built from the west walk on Swann avenue to the nearby pump (Old No. 2).

The slopes on the west side of the bicycle path along Auchentoroly Terrace, being almost denuded and unsightly also from their form, an attempt has been made to improve the same by flattening the slopes, with material excavated from nearby locations for shrub beds, and by restoring the surface with soil. The early descent of winter has prevented the completion of this work, but it is the intention to finish it as early in the spring as practicable. The slopes along the Mall have been repaired with soil and resodded where necessary, as have also many of the steeper slopes in various parts of the park, notably just north of Morris Fountain and along the Beechwood drive.

Previously there were ten sod courts to the north of the conservatory and ten tennis courts with the sod removed—"skin courts"—to the south of the conservatory. The demand for permits for playing on the "skin courts" being so far in excess of the opportunities for granting the same, and the very small demand for the grass courts led to the recommendation, which was approved, for the removal of the sod from the courts north of the conservatory. This sod has been removed from all the courts but one, so that there are now nineteen "skin courts" to supply the demand. The sod was retained on one court for such demand as might arise for this court.

In response to requests from a number of horseback riders in Druid Hill Park, three "jumps" have been erected at suitable places in the park, two near the pumping station and one between the Pimlico road and the "Dummy Station." These jumps consist of a mound of earth about fifty feet long, two to two and one-half feet high, one foot wide at the top and three feet wide at the bottom. The mounds are sodded and planted with hedge plants about eighteen inches high. The jumps are so situated as to be out of the regular path of the riders, and no one is obliged to take them.

It having been so often proved that the purchase of such material as coal, feed, etc., by weight was the only accurate method of comparing prices and checking the delivery of orders for the same, the recommendation was made, and was approved, that a set of platform scales be installed in Druid Hill Park. These were placed in an inconspicuous location in the rear of the propagating houses, and it is believed have so far been of much more value than they cost.

The flock of pure bred Southdown sheep having been reduced in number to about forty-five ewes, it was deemed advisable by the Board to increase the same, and to infuse new blood into the flock, by the importation of some new stock. Two high bred rams were imported from the Royal flock in England at a cost of about $280. The choicest of last spring's buck lambs were disposed of for breeding purposes, and the other buck lambs and undesirable ewes were sold for mutton. The new importations seem to be doing well, and it is believed there will be no difficulty in increasing the flock to the desired number of approximately one hundred, and maintaining it at a high standard. There is considerable demand from breeders for lambs from this flock.

The steam roller owned by this Department being, in the opinion of the General Superintendent, unfit for the demands on it—for reasons of the type and weight being unsuitable and too light for road work, and too large and too heavy for path work—on his recommendation, an exchange of the same was approved by the Board. We were able to secure in place of this six-ton double-drum roller, one modern three-wheel road roller, weight ten tons, and one double-drum lawn roller, weight four tons, at a cost of slightly less than $3,000. These two rollers have been in constant service all the season, and the investment has proved its value. They are now in good condition.

A very unsightly place near one of the most frequented paths in Druid Hill Park existed along and adjacent to the

banks of the stream between the Columbus statue and the base-ball grounds. This was caused by an undrained area of lawn, which was always difficult to cut and had more or less the appearance of a marsh, and by the bare and gullied banks of the stream, caused by neglect to repair the damages from wear and washing rains. A wall was built along either side of the stream where necessary and the banks above the same carefully resurfaced and sodded. The marshy area was drained and its surface raised sufficiently to secure proper shedding of the surface water. The course of the stream was changed slightly, and the general result is a conspicuous improvement.

It being found unnecessary and uneconomical to maintain a propagating house at Perkins Square, the removal of the same was recommended and approved by the Board, there being apparently no demand for a conservatory in this location. The space formerly occupied by this house has been filled in, and will improve the appearance of the square.

There being no toilet convenience for the public in Harlem Square, the installation of such facilities was ordered by the Board and have been completed. It is understood they are greatly appreciated. A neat toilet for each sex was constructed in the basement of the office building near the centre of the square at a cost of about $1,580.

At the request of the School Gardens Association, gardens were arranged in the Brewer Triangle. No use was formerly made of this triangle, and it is believed the children have appreciated the privilege. No complaints regarding the same have reached this office.

New and additional water supplies for watering the lawns and flower beds have been installed in Eutaw Place.

Before the responsibility for the sidewalks around city property, including the parks and squares, was fully understood by this Department, the walks around Callow Triangle were widened to improve the appearance of this small park

and to assist in its proper maintenance. One hundred and twenty-two square yards of concrete pavement were laid at a cost of $127.

On taking the matter up with the Superintendent of Lamps and Lighting, in response to a petition for additional light in Bolton Square, the superintendent installed an arc light in the centre of the square, which is a great improvement.

As ordered by the Board, with the improvement of the Druid Hill avenue and Fulton avenue entrances to Druid Hill Park in view, a survey has been made by the Engineering Department of this section of the park, and a plan made of the same and sent to the Landscape Architect for his information in designing suitable improvements in this locality.

Considerable annual expense for tools in this Department is unavoidable. Such tools have been bought from time to time as found necessary, and a reference to the inventories for 1903 and 1904 will show the tools that are now on hand.

PATTERSON DISTRICT.

MAINTENANCE.

The year 1904 found Patterson Park in a very dilapidated condition. The lawns had been sadly neglected for some time, but little effort having been made apparently to repair the spots worn bare by constant usage, or the places washed and gullied by the rains. The buildings were badly in need of paint and the conservatory was actually in a dangerous condition, owing to the wooden frame work being badly rotted. A strong effort has been made to put the park in good condition this year, and a great improvement is already noticeable. A large amount of sodding and seeding has been done. The bare spots and gullies have been dressed with soil with satisfactory results. The Casino and various other buildings have been painted, and the walks and drives generally repaired.

A number of shrubs and trees have been set out and the garden department generally put in good condition. In re-

sponse to a request from the Collector of the Port, by direction of your Board, the flower beds around the Customs House have been planted and cared for this year at the expense of this Department, although this property does not belong to nor is under the care of the Park Department.

The trees in the district have generally been pruned and cared for as found necessary.

A contract has been made for rebuilding the conservatory at a cost of approximately $15,000. This work is well in hand, and promises to be a great improvement not only in appearance, but in enlarging the capacity. A thoroughly modern building is being erected.

The outdoor gymnasium at Patterson Park, the erection of which was completed during the winter, was formally opened with appropriate ceremonies on June 4 with an estimated attendance of 8,000. The gymnasium has been greatly appreciated and patronized during the season.

Last winter was a very favorable season for skating, and the facilities offered by Patterson Park in this direction were enjoyed by a large number. Benches were placed in convenient locations for the use of the skaters and spectators, and everything possible done, in the way of scraping and cleaning the ice, etc., to add to the comfort and pleasure of the skaters. The base ball diamonds have been kept in good condition and have been constantly in use. During the season some slight changes in the diamond in the northeast corner of the park have been ordered with a view to greatly improving the same. The backstop will be moved back, and the axis of the diamond slightly shifted, so as to render the hollow in left field less likely to be objectionable.

The concrete walks in Madison Square were badly cracked and broken in places, and as much work toward repairing these has been done, as the weather and other circumstances would permit, and it is the intention to complete these repairs early in the Spring.

The amount of cement walk relaid this fall was 2,268 square feet.

IMPROVEMENTS.

In response to a request from the School Gardens Association, a portion of the park near the easterly boundary has been set aside for the children's gardens, and turned over to this association for its use. The children's play grounds have been enlarged and improved by the placing of a wooden curb around the same and the removal of the worn out sod inside the curb, and by covering the whole area with a thick layer of sand. Additional lights and apparatus have been provided in the outdoor gymnasium, and a previous contract for the erection of the frame work been completed. The temporary dressing house near the gymnasium has been supplied with water and generally put in as good condition as possible, pending the erection of a substantial and modern field house. Five additional electric lights have been placed in the park. Some additions have been made to the drainage system. One tennis court, work on which was started in 1903, was completed for use at the beginning of the tennis season of 1904.

The children's play ground in City Spring Square has been enlarged by 2,000 square feet by removing an unnecessary walk running east and west near the north side of the square, and permission given the Playgrounds Association to erect additional apparatus for use of the children within this portion of the square.

The stock in the nursery has been improved by the addition of a large number of plants and by the cultivation of several other varieties. The propagating houses have been overhauled, and a new office been built in the space formerly occupied by the room used for storage purposes. The easterly propagating houses have been further improved by the addition of ventilators, with which they were formerly unprovided. An advantage was taken in tearing down the old conservatory to use the ventilators from it, which were in good condition, by placing them in the propagating houses.

The fountain on Broadway Squares, between Chase street and Ashland avenue, having become greatly in need of repairs, on request of the adjacent property owners, has been removed and a flower bed substituted therefor. Hedges have been planted along the sides of the steps in Johnston and Collington Squares.

A new walk has been built diagonally across the lawn in front of the conservatory and west of the Mall in Patterson Park to accommodate the travel, which had worn an irregular path across this lawn and where it was impossible to prevent this wear. A number of flower beds have been replaced with sod because of their inappropriate locations, and other beds have been planted with hardy shrubs, thus not only improving the general appearance, but considerably reducing the annual cost of propagation.

The wall around the boat lake has been completed at the north end and the adjacent walks and drives widened and improved. The entrance from the main drive to the ball field and athletic grounds has been rebuilt and greatly improved.

The entrance at the northwest corner of the park at Baltimore street and Patterson Park avenue has been greatly improved by setting the posts on either side back several feet.

Several undesirable Carolina poplar trees have been removed from the Eastern avenue frontage of Patterson Park, and a new hedge planted between Patterson Park avenue and the propagating houses. It was also found necessary to run wires through the hedges around Patterson Park to prevent their destruction by people cutting through the hedge, and this has been done in a substantial manner by using short lengths of iron pipe as posts and attaching the wires thereto.

Twenty-three 32-candle power incandescent electic lights have been installed along the Mall north of Taurus fountain (including three in the fountain shelter) for its proper illumination, and the public closets in the stable have been lighted

with electricity where formerly no illumination was provided. Four 16-candle power incandescents have been placed in each pavillion; two 16-candle power incandescents have been placed in the field house.

The steps on the north side of the park opposite Milton avenue and Montford avenue have been rebuilt. The building used as a band stand in Patterson Park is badly in need of repairs. It is rather unsatisfactory in many ways, and I would recommend that it be rebuilt in different form as early as practicable.

This Department has received from the Society of the War of 1812, three old cannon, which the Society proposes to erect within the old fort near the observatory. These cannon have not yet been mounted. The vases and urns in the district have been repainted as found necessary.

The water supply in Jackson Place is unsatisfactory and in need of repairs. I would recommend that this be overhauled as soon as possible, and that the necessary supply pipes, stops, etc., be at once installed for the proper watering of the grass and flowers during the dry season.

SOUTHERN DISTRICT.

MAINTENANCE.

The Southern District was found at the beginning of the year to be in bad condition. Much necessary outdoor work, such as the care of lawns, trees, roads, etc., having evidently been neglected in favor of the indoor propagation of flowers. An effort has been made to make up for this neglect. Most of the buildings, signs, etc., have been repainted, the lawns sodded and seeded and dressed with soil, and the roads and paths given such attention as circumstances would permit. It has been felt that Carroll Park itself was in an undeveloped stage, and consequently such work as would possibly be upset, when the final plans for the development of this park have been adopted by your Board, has been avoided. A survey

has been made of the park and the plan will be submitted to the Landscape Architect this winter for his consideration and report to your Board. In the meantime every effort has been made to keep the park neat and attractive, to make such repairs as were found necessary, and to make such temporary improvements as necessity demanded.

The lighting system of Carroll Park has been rearranged, as also generally through the district, it is believed, with improvement and economy.

The wall surrounding Federal Hill Park has been re-pointed. The walks in the parks and squares of this district have been generally overhauled and repaired.

IMPROVEMENTS.

The new stable at Carroll Park begun in 1903 has been finished and is now in good condition. The green-house at Riverside Park has also been completed.

A platform scale has been bought and installed at Carroll Park in a suitable location, and it is believed has proved a profitable investment. It might be stated that a bin at the superintendent's residence, which was formerly supposed to contain fifteen tons of coal, has been found to hold less than ten tons by weight, and the cellar of the propagating house, in which it was formerly supposed, from the bills, possible to store fifty tons of coal, has been filled by less than thirty-two tons by weight.

Every improvement and addition to the gymnasium facilities in this district that has seemed advisable, in view of the unfinished stage of the locations occupied for this purpose, has been put in.

The gymnasium at Carroll Park has been increased by a basket ball court, and posts have been set around the court and the gymnasium for the support of a wire cable, which has been purchased, for the purpose of holding back the crowds from those using the apparatus and court. Electric

lights have been installed at the gymnasium to provide for its possible use after dark.

The gymnasium apparatus presented by Robert Garrett, Esq., to Swann Park was set up in a temporary but substantial manner, pending the development of this park according to the plans of the landscape architect, which have been approved by your Board, and a temporary dressing house and a supply of city water for this park have been provided. The further development of this park has been prevented by the failure by this Department to acquire the strip of land along the water front. Negotiations for this acquisition are in progress, and the possession of this strip by this Department is absolutely necessary before the further work of carrying out the approved plans can be prosecuted. In the meantime, however, a temporary running track and a ball ground have been staked out, and the various athletic societies have been allowed to use the park.

The work of the development of Latrobe Park, according to the approved plans, has been pushed; and is well under way. It is hoped that, while the appearance of the park will depend to a great extent on our success with nature in the growth of the lawns, shrubs and trees, the actual use of the park may be begun next season.

The basket ball court has been laid out in the southerly portion of Riverside Park, removing it from the northwesterly portion where it greatly impaired the general appearance of the park. The children's gardens at this park have also been enlarged.

New entrance posts have been erected at the Riverside avenue entrance to Riverside Park to correspond with those at the northeast and northwest corners of the park, and these entrances are now practically alike in appearance. I would recommend that these bases be surmounted by suitable lamp posts as soon as practicable.

The toilet in Federal Hill Park has been thoroughly overhauled and modern facilities provided. In order to secure

the full benefit of the same, it appears necessary to provide a proper sewer for the carrying away of the waste. Formerly an old well under this toilet was used for this purpose. This well was thoroughly cleaned out by us to a depth of sixty-five feet, but even with the increased quantity of water used, has proved inadequate.

The walks in the southwest corner of the square, having proved of insufficient width for the accommodation of the travel, have been widened and their lines improved.

A hedge has been planted along the Warren avenue side of the park in a location formerly occupied by the wall, which was torn down in the fall of 1903.

A small plot of ground near the southeast corner of the park has been granted to the Children's Playground Association for their use, and a sand pit and see-saw provided.

Six old cannon have been received at Riverside Park from the Society of the War of 1812 for mounting in this park.

WYMAN PARK.

The work of developing Wyman Park according to the plans of the landscape architect has been carried along. The new road on the easterly side of Stony Run has been graded from Merryman's lane south to a ravine near Station 56, and from Station 53 southerly to Twenty-ninth street, the grading is practically completed.

The bridge over the ravine between Stations 53 and 55 will be completed in the spring. It is the intention to avoid a larger outlay for this work, until the demands on it more clearly indicate the dimensions and its character, by constructing an inexpensive, though strong, structure of the timber on hand, supplemented by such as may be necessary to be purchased, and to also thereby hasten the opening of this road to travel. By the time this structure is in need of rebuilding, it is expected that not only will the means for the same be

available, but also will other conditions permit of the building of a permanent arch or viaduct as may then be determined.

It is hoped to complete the grading on the main line of the road early in the spring.

Respectfully submitted,

W. W. CROSBY, C. E.,

General Superintendent.

	The Secretary-Treasurer.	1 Bookkeeper. 1 Stenographer. 1 Office Boy. (Other clerks as may be necessary).		
The Board of Park Commissioners.	The General Superintendent.	Superintendent of Druid Hill District, (Jas. W. Boone).	1 Head Gardener.	3 Gardeners. 2 Boys. 8 Laborers and others.
			3 Foreman.	2 Carpenters. 3 Masons. 1 Plumber. 2 Engineers. 2 Flagmen. 30 Laborers. Teamsters. 2 Painters.
			1 Police Sergeant.	12 Day Officers. 12 Night Officers.
			1 Head Animal Keeper.	1 Asst. An. Keeper. 1 Shepherd.
			4 Square Keepers	5 Square Laborers. 2 Square Police.
			1 Stable Boss.	13 Teamsters.
			1 Toilet Keeper.	
			1 Blacksmith.	
		Superintendent of Clifton District, (N. F. Flitton).	1 Head Gardener.	2 Gardeners.
			1 Foreman.	1 Carpenter. 1 Painter. Teamsters. 12 Laborers.
			3 Square Keepers.	5 Square Laborers.
			1 Stable Boss.	4 Teamsters.
			4 Day Police.	
			1 Night Police.	
		Superintendent of Patterson District, (Chas. L. Seybold).	1 Head Gardener.	2 Gardeners. 2 Boys. 3 Laborers.
			1 Foreman.	1 Painter. Masons. Teamsters. 18 Laborers.
			6 Square Keepers.	3 Laborers. 3 Square Police.
			6 Day Police.	
			2 Night Police.	
			1 Blacksmith.	
		Superintendent of Southern District, (J. Fred. Wessler).	1 Head Gardener.	3 Gardeners. 1 Laborer. Teamsters. 1 Boy.
			2 Foremen.	1 Painter. 7 Laborers. 3 Teamsters.
			3 Square Keepers.	1 Laborer.
			3 Day Police.	
			3 Night Police.	
		Assistant Engineer, (P. C. Kennedy).	1 Transitman. 2 Chainmen.	
		Assistant Superintendents, (E. F. Ruggles). (H. M. Gittings).	Such force as may be assigned to them for their work.	(Average "floating force 1904—55 men.)

TABLE OF MAINTENANCE, 1904.

SPECIALLY ITEMIZED TO SHOW WORK DONE IN THE SEVERAL PARK DISTRICTS.

	Clifton District		Druid Hill District.		Patterson District.		Southern District.	
	Amounts or Numbers.	Cost.	Amounts or Numbers.	Cost.	Amounts or Numbers.	Cost.	Amounts or Numbers.	Cost.
Repairing and painting Mansion (exterior)		$2,084.52						
" " " Washington Monument		615.00						
" " " Mansion House (interior)				$1,521.42				
Painting Stone House (interior and exterior)				365.22				
" Office Building (interior and exterior)				150.00				
" Superintendent's House (interior and exterior)				165.00				
Repairing and painting Pavillion (Carroll)								$192.00
" " " Spring House (Union)								365 00
" " " Offices (Franklin and Union)								55.00
Flag poles repaired and painted			1	68.50	3	$ 58.00	2	40.00
Manure received:								
Horse manure	100 loads.		200 loads.	107.60	670	300.00	16 loads.	
Street sweepings	1 470 cu. yds.		730 cu. yds.				2,100 cu. yds.	
Bone meal used	500 lbs.		7,460 lbs.		382 lbs.	5.15	2,700 lbs.	36.45
Cow manure			25 loads.	25.00				
Manure and street sweepings spread	348 loads		200 loads.				1,515 loads.	
Lime used			82.8 tons.	331.20				
Soil bought			860 loads.					
Soil taken from duck pond			1,500 cu. yds.					
" " " boat lake			500 cu. yds.					
Sod bought					62,500 sq. ft.	180.00	19,200 sq. ft.	26.25
Sod used	5,700 sq. ft.		83,400 sq. ft.				62,400 sq. ft.	
Seed bought and used	3 bu.	19.20	40 bu.	275.90	12 bu.	85.50	6½ bu.	32.25
Plants propagated, season 1903-4	83,842		123,180		417,500		186,000	
Plants being propagated season 1904-5	54,890		76,165		136 250		66,500	
Bulbs bought and planted 1903	51,550	569.05	112,725	1,275.90	56,950	628 95	48,550	539.10
Bulbs saved from above	21,420		59,400		40,000		29.130	
Bulbs bought in 1904	23,150	258.61	48,530	297.74	22,950	132.70	42,050	370.07
Bulbs planted 1904	44,570		107,930		62 950		71,180	
Cement walks repaired	245 sq. ft.		198 sq. ft.				3,994 sq. ft.	
Brick walks repaired			445 sq. ft.					
Paths repaired			7,900 lin. ft.					
Roads repaired			31,725 lin. ft					
Stone crushed and hauled from crusher			4,310 cu. yds.					
Stone crushed and stacked at crusher			,460 cu. yds.					
Hay cut	30 tons.		57 tons.					

TABLE OF IMPROVEMENTS, 1904.

SPECIALLY ITEMIZED TO SHOW WHAT WAS DONE IN EACH OF THE PARK DISTRICT.

	Clifton District.		Druid Hill District.		Patterson District.		Southern District.	
	Amounts or Numbers.	Cost.	Amounts or Numbers.	Cost.	Amounts or Numbers.	Cost.	Amounts or Numbers.	Cost.
Additional lights installed, arcs					5		16	
" " " 16 C. P. incandescent	15	$ 110.00	92	$ 281.04	13		60	
" " " 32 C. P. incandescent					22			
" " " gas	10							
Half-night arcs changed to all night, Collington					5			
Area of new walks built, sq. yds			9,311		900			
" " " " cinder—Riverside, sq. yds							1,938	$ 198.00
" " " " asphalt block—Federal Hill, sq. yds							116	174.25
" " " " " " sq. yds			446					
Area of roads rebuilt, sq. yds			13,900					
Moving barn				561.12				
Increase in number of stalls			5					
Area of cement walks built, sq. yds			290					
" " " " laid, Federal Hill and Riverside, sq. ft.							465	48.64
New platform scales	1-3 tons	380.39	1-3 tons	235.53			1-3 tons	197.22
Swings purchased			25	100.00				
New benches built			188	453.44	55	$ 164.63		
New toilets, Harlem and Federal Hill			2	1,578 18			1	426.36
Shrubs bought	2	16.00	2,812	439 27	8,767	442.20		
Shrubs planted	860		3,456		12,336			
Cinders used in stable yard, loads			128					
Hedge plants set out, Harlem			480					
Trees planted	72		25	25.00	9			
Trees removed			8		20			
Rams bought			2	279.07				
Rams sold			5	83.00				
Other sheep sold			11	32.00				
Wool sold, pounds			270	67.50				
New entrance posts, Riverside							2	198.00
Drainage of slopes, Federal Hill—feet drain tile laid							1,254	543.39
" " " " loads, shells used							124	
Temporary dressing room, Swann Park								7.50
" " " " " water supply								39.67
Grading, Latrobe Park—cu. yds							12,000	3,824.72
Grading, Wyman Park—cu. yds			18,000	12,055.59				
Pipe laid, 12 in. 304. ft, 18 in. 140. ft, 24 in. 136 ft.—ft.			580					
Including grubbing, clearing and blasting								
Grading for gymnasium, Clifton—cu. yds	6,000	2,200.03						
Draining for gymnasium, 24-in pipe laid, ft	328	327.60						
Addition to Children's Playground, removal of walk, sq. ft					2,000	40.76		
Additions to Patterson Park gymnasium :								
Pairs of flying rings					2	9.60		
Climbing poles and ropes					2	10.40		
Leather horse					1	34.00		
Leather buck					1	40.00		
Enlargement of capacity conservatory, Patterson—per cent					40	15,000.00		
School gardens built, Brewer—number of beds			25					
Spring water pipe, boat lake—ft			725	420.29				
Water supply and fire protection, pipe—6 in. 888 ft., 2 in. 687 ft.			1,575	677.31				
Exchange of steam rollers, received one 10 ton and 4 ton plus one six ton roller				2,939.00				

APPENDIX B

Report of the Secretary-Treasurer.

(1904.)

Report of Secretary Treasurer.

BALTIMORE, December 31, 1904.

To the Honorable the Board of
Park Commissioners of Baltimore, Md.

GENTLEMEN:—I have the honor to submit herewith my report as Secretary-Treasurer of the Board of Park Commissioners for the year ending December 31, 1904.

Respectfully,

J. V. KELLY,

Secretary-Treasurer.

FINANCIAL STATEMENT FOR YEAR ENDING DECEMBER 31, 1904.

			Dr.	Cr.
Cash on hand January 1, 1904:				
Balance from 1901				$4,686 31
" " 1902				6,211 22
" " 1903				7,732 74
Total cash on hand, January 1, 1904				$18,630 27
Receipts 1904:				
Railway Tax		$337,213 06		
Rents*		1,954 00		
Sales*		2,340 39		
Fines		271 00		
Monument toll		844 05		
Total		$342,622 50		
Total appropriations for 1904		$379,000 00		
		342,622 50		
			$36,377 50	

EXPENDITURES ON APPROPRIATIONS.

Salaries, Office:				
Appropriation		$3,087 50		
Disbursed	$3,024 00			
Balance	63 50			
		3,087 50		63 50
Salaries, Parks and Squares:				
Appropriation		200,032 84		
Disbursed:				
Maintenance	$154,092 52			
Construction	35,195 27			
Total	$189,287 79			
Balance	10,745 05			
		$200,032 84		$10,745 05

*For detail see page 73.

			Dr.	Cr.
Expense, Office:				
Appropriation		1,718 00		
Disbursed	$1,583 84			
Balance	134 16			
		1,718 00		134 16
Expenses, Parks and Squares:				
Appropriation		155,392 50		
Disbursed:				
Maintenance	$53,212 02			
Construction	5,980 24			
Fixed Charges	59,598 15			
Total	$118,790 41			
Balance	36,602 09			
		155,392 50		36 602 09
New Improvements:				
Appropriation		18,769 16		
Disbursed	$16,784 75			
Balance	1,984 41			
		18,769 16		1,984 41
Total credit balances				$68,159 48
Total debit balances			$36,377 50	36,377 50
Net cash balances on hand January 1, 1905				$31,781 98

TABLE OF MONTHLY CHARGES, 1904.

1904.	Average No of Men.	Salaries: Parks and Squares.		Salaries: Office.	Expenses: Office.	Expenses: Parks and Squares.				New Improvements	Totals.	Total Payments each month.	Liabilities carried over at end of each month.
		Maintenance.	Construction.			Liabilities from 1903	Maintenance.	Construction.	Fixed Charges.				
January	243	$ 8,971 04		$252 00	$ 20 00	$531 00	$4,682 60	$ 62 89	$9,898 23		$24,417 76	$9,563 21	$14,854 55
February	210	9,234 05		252 00	258 95		3,982 31	60 00	15,618 75		29,406 06	15,363 15	28,897 46
March	221	10,746 77		252 00	28 15		4,158 92	963 97			16,149 81	35,643 63	9,403 64
April	257	10,742 28		252 00	186 69		6,756 95	1,979 14	5,446 18		25,363 24	21,984 22	12,782 66
May	377	12,005 94	2,486 23	252 00	41 68		9,608 61	1,135 36		2,927 07	28,456 89	23,733 26	17,506 29
June	430	13,028 08	4,960 50	252 00	248 07		3,504 23	792 50		434 68	23,220 06	29,453 06	11,273 29
July	382	21,538 91	4,766 76	252 00	333 84		3,591 15	102 75	6,451 66	751 38	37,788 45	39,634 34	9,427 40
August	431	14,150 03	4,836 94	252 00	77 09		4,409 58	378 63	15,618 75	3,131 33	42,854 35	29,958 81	22,322 94
September	438	16,053 34	5,850 36	252 00			3,539 86	10 00		2,807 07	28,512 63	44,117 29	6,718 28
Totals	332	$116,470 44	$22,900 79	$2,268 00	$1,194 47	$531 00	$44,234,21	$5,485 24	$53,033 57	$10,051 53	$256,169 25	$249,450 97	$6,718 28
Balances		48,367 13	12,294 48	819 50	523 53		45,543 90		6,564 58	8,717 63	122,830 75	129,549 03	6,718 28
Appropriations		$164,837 57	$35,195 27	$3,087 50	$1,718 00	$531 00	$89,778 11	$5,485 24	$59,598 15	$18,769 16	$379,000 00	$379,000 00	
Monthly average		$12,941 16	$2,544 53	$252 00	$132 72		$4,914 91	$609 47	$5,892 62	$1,116 83	$28,404 25		
October	399	$12,765 62	$3,744 57	$252 00	$ 93 65		$3,207 15		$4,564 58	$ 990 93	$25,618 50	$26,267 12	$6,069 66
November	348	11,845 85	4,444 42	252 00	123 72		4,994 87			836 74	22,497 60	23,615 88	4,951 38
December	312	13,010 61	4,105 49	252 00	172 00		2,431 64		2,000 00	5,239 56	27,211 30	30,136 82	2,025 86
Totals	353	$37,622 08	$12,294 48	$756 00	$389 37		$10,633 66		$6,564 58	$7,067 23	$75,327 40	$80,019 82	
Balances		10,745 05		63 50	134 16		34,910 24			1,650 40	47,503 35	49,529 21	$2,025 86
Balance October 1		$48,367 13	$12,294 48	$819 50	$523 53		$45,543 90		$6,564 58	$8,717 63	$122,830 75	$129,549 03	
Average last three months		$12,540 69	$4,098 16	$252 00	$129 79		$3,544 55		$2,188 19	$2,355 74	$25,142 46		
Total charges		$154,092 52	$35,195 27	$3,024 00	$1,583 84	$531 00	$54,867 87	$5,485 24	$59,598 15	$17,118 76	$331,496 65		
Total payments		$154,092 52	$35,195 27	$3,024 00	$1,583 84	$531 00	$53,176 02	$5,485 24	$59,598 15	$16,784 75		$329,470 79	
Charges carried to 1905							$1,691 85			$334 01			$2,025 86

TABLE OF MONTHLY PAYMENTS, 1904.

1904.	Average No. of Men.	Salaries: Parks and Squares.		Salaries: Office.	Expenses: Office.	Expenses: Parks and Squares.			New Improvements.	Totals.
		Maintenance.	Construction.			Maintenance.	Construction.	Fixed Charges.		
January	243	$ 8,971 04		$252 00	$ 10 00	$ 330 17				$ 9,563 21
February	210	9,234 05		252 00	10 00	867 10		$ 5,000 00		15,363 15
March	221	10,746 77		252 00	258 00	3,862 74	$ 507 14	20,016 98		35,643 63
April	257	10,742 28		252 00	54 10	4,217 72	771 94	5,946 18		21,984 22
May	377	12 005 94	2,486 23	252 00	180 44	7,597 70	1,210 95			23,733 26
June	430	13,028 08	4,960 50	252 00	154 82	9,385 02	1,627 64		$ 45 00	29,453 06
July	382	21,538 91	4,766 76	252 00	447 92	4,264 36	1,357 54	6,451 66	555 19	39,634 34
August	431	14,150 03	4,836 94	252 00	52 99	5,391 20	190 25		5,085 40	29,958 81
September	438	16,053 34	5,850 36	252 00	23 50	4,220 63	314 78	15,618 75	1,783 93	44,117 29
October	399	12,765 62	3,744 57	252 00	92 10	2,031 57		4,564 58	2,816 68	26,267 12
November	348	11,845 85	4,444 42	252 00	69 19	5,961 30			1,043 12	23,615 88
December	312	13,010 61	4,105 49	252 00	230 78	5,082 51		2,000 00	5,455 43	30,136 82
Totals	337	$154,092 52	$35,195 27	$3,024 00	$1,583 84	$53,212 02	$5,980 24	$59,598 15	$16,784 75	$329,470 79
Cash balances on appropriations.		$10,745 05		63 50	134 16	36,602 09			1,984 41	49,529 21
Appropriations		$164,837 57	$35,195 27	$3,087 50	$1,718 00	$89,814 11	$5,980 24	$59,598 15	$18,769 16	$379,000 00
Balance on appropriations		$10,745 05		63 50	$134 16	$36,602 09			$1,984 41	$49.529 21
Falling off in receipts										$17,747 23
Cash balance										$31,781 98

SALARIES, PARKS AND SQUARES. DISTRICT CLASSIFICATIONS, BY MONTHS.

(Exclusive of Fixed Charges, 1904.)

1904.	Druid Hill District.		Southern District.		Patterson District.		Clifton District.		General.		Totals		Grand Total.
	Maintenance.	Construction.	Maintenance.	Construction.	Maintanance.	Construction.	Maintenance.	Construction.	Maintenance.	Construction.	Maintenance.	Construction.	
January	$ 3,760 90		$ 2,232 94		$ 1,404 48		$ 1,572 72		$ 250 00		$ 9,221 04		$ 9,221 04
February	3,482 19		1,858 88		1,785 51		1,857 47		250 00		9,234 05		9,234 05
March	3,691 62		1,626 64		2,738 80		2,439 71		250 00		10,746 77		10,746 77
April	4,812 66		1,635 10		2,272 31		1,772 21		250 00		10,742 28		10,742 28
May	4,819 20	$ 2,280 66	1,990 82		3,043 92		1,896 58		250 00	$ 205 57	12,000 52	$ 2,480 23	14,486 75
June	5,042 01	3,740 45	2,425 59		3,323 09		1,987 39		250 00	1,220 05	13,028 08	4,960 50	17,988 58
July	11,430 80	2,308 32	3,909 18	$ 24 13	3,700 27		2,248 65	$ 450 48	250 00	1,983 83	21,538 90	4,766 76	26,305 66
August	6,345 12	1,454 53	2,582 04	549 52	3,135 93		1,836 95	873 08	250 00	1,959 81	14,150 04	4,836 94	18,986 98
September	6,019 71	1,063 32	2,743 36	690 86	4,108 01		2,937 68	999 29	250 00	3,096 89	16,058 76	5,850 36	21,909 12
October	5,902 36	868 04	2,332 53	663 55	2,419 95		1,860 78	542 61	250 00	1,670 37	12,765 62	3,744 57	16,510 19
November	5,861 61	701 12	1,992 45	1,183 45	2,255 50		1,486 29	865 18	250 00	1,694 67	11,845 85	4,444 42	16,290 27
December	7,115 12	973 93	2,029 94	1,126 27	2,132 00		1,483 55	467 09		1,538 20	12,760 61	4,105 49	16,866 10
Totals	$68,283 30	$13,390 37	$27,359 47	$4,237 78	$32,319 77		$23,379 98	$4,197 73	$2,750 00	$13,369 39	$154,092 52	$35,195 27	$189,287 79

EXPENSES, PARKS AND SQUARES. DISTRICT CLASSIFICATIONS BY MONTHS.

(Exclusive of Fixed Charges, 1904.)

1904.	Druid Hill District.		Southern District.		Patterson District.		Clifton District.		General.		Totals.		Grand Total.
	Maintenance.	Construc ion.	Maintenance.	Construction.	Maintenance.	Construction.	Maintenance.	Construction.	Maintenance.	Construction.	Maintenance.	Construction.	
From 1903					$ 36 00	$495 00					$ 36 00	$ 495 00	$ 531 00
January	$1,501 25		$1,000 21	$62 89	902 21		$ 803 93		$475 00		4,682 60	62 89	4,745 49
February	1,537 58		974 60		834 28	60 00	592 10		43 75		3,982 31	60 00	4 042 31
March	1,562 81	$332 67	851 67	16 22	883 26	217 90	855 68	$397 18	5 50		4,158 92	963 97	5,122 89
April	3,619 75	1,153 01	1,352 41	110 60	1,207 01	506 23	533 15	23 50	44 63	$185 80	6,756 95	1,979 14	8,736 09
May	4,073 74	831 36	1,197 25		1,364 90	233 00	2,742 86	66 00	229 86	5 00	9,608 61	1,135 36	10,743 97
June	1,428 43	534 94	964 65	58 00	745 15	41 31	366 00	30 15		128 10	3,504 23	792 50	4,296 73
July	2,007 07	34 30	524 59	8 75	609 41	8 70	396 02		54 06	51 00	3,591 15	102 75	3,693 90
August	2,751 25	152 86	561 66	49 40	608 09	163 63	439 98		48 60	12 74	4,409 58	378 63	4,788 21
September	1 349 82	10 00	922 73		854 41		412 90				3,539 86	10 00	3,549 86
October	1,953 47		250 96		108 59		867 33		26 80		3,207 15		3,207 15
November	1,486 17		1,929 10		760 68		818 92				4,994 87		4,994 87
December	1,259 81		368 88		449 20		344 25		9 50		2,431 64		2,431 64
Totals	$24,531 15	$3,049 14	$10,898 71	$305 86	$9,363 19	$1,725 77	$9,173 12	$516 83	$937 70	$382 64	$54,903 87	$5,980 24	$60,884 11

EXPENSES, PARKS AND SQUARES: CLASSIFIED BY DISTRICTS, 1904

(EXCLUSIVE OF FIXED CHARGES.)

CLASSIFICATION.	Druid District.		Southern District.		Patterson District.		Clifton District.		General.		Totals.		Grand Total.
	Maintenance.	Construction.	Maintenance.	Construction.	Maintenance.	Construction.	Maintenance.	Construction.	Maintenance.	Construction.	Maintenance.	Construction.	
From 1903, unclassified					$ 36 00	$ 495 00					$ 36 00	$ 495 00	$ 531 00
Superintending	$ 493 09	$ 347 80	$ 327 95		43 05		$ 210 76		$707 84	$382 64	1,782 69	730 44	2,513 13
Conservatory and greenhouse	1,629 14	161 79	1,506 85	$ 79 11	1 833 69	52 50	913 23				5,882 91	293 40	6,176 31
Outdoor gardening and forestry	384 45	534 66	184 66	15 00	318 45	335 09	134 23	$ 90 30			1,021 79	975 05	1,996 84
Lawns	2,616 09	27 85	1,838 65	95 00	1,004 40	170 18	700 35		229 86		6,389 35	293 03	6 682 38
Roads and drives	624 94	231 61	41 75		136 95	75 00	65 38	4 35			869 02	310 96	1,179 98
Paths and walks	169 60	153 50	132 62		207 66	92 40	27 35				537 23	245 90	783 13
Athletic field and playground	230 42	18 45	19 30	14 90	30 08	338 20	1 80				281 60	371 55	653 15
Buildings and pavillions	3,204 27	594 40	904 71	23 00	414 78	10 45	2,136 52				6,660 28	627 85	7,288 13
Policing and Gatekeeping	1,008 10		281 05		332 85		175 65				1,797 65		1,797 65
Live stock, stable	3,730 68	541 87	1,174 42		890 03		819 84	25 00			6,614 97	566 87	7,181 84
Zoological collection	2,347 41										2,347 41		2,347 41
Quarrying	422 59	5 00									422 59	5 00	427 59
General repairing	1,481 49		544 48	78 85	508 97		262 00				2,796 94	78 85	2,875 79
Supplies, flags, etc	26 70		22 80		39 15						88 65		88 65
Bulbs	253 08		314 56		112 79		219 82				900 25		900 25
Electric lighting	4,601 81	4 00	3,003 83		3,210 38		112 23	110 00			10,928 25	114 00	11,042 25
Gas, oil and naphtha	1,186 01		535 08		210 96		2,745 96				4,678 01		4,678 01
Telephones	121 28		66 00		33 00		33 00				253 28		253 28
Monument							615 00				615 00		615 00
New benches		428 21				156 95		287 18				872 34	872 34
Totals	$24,531 15	$3,049 14	$10,898 71	$305 86	$9,363 19	$1,725 77	$9,173 12	$516 83	$937 70	$382 64	$54,903 87	$5,980 24	$60,884 11

SALARIES—PARKS AND SQUARES, CLASSIFIED BY DISTRICTS, 1904.

Classification.	Druid Hill District.		Southern District.		Patterson District.		Clifton District.		General.		Totals.		Grand Total.
	Maintenance.	Construction.	Maintenance.	Construction.	Maintenance.	Construction.	Maintenance.	Construction.	Maintenance.	Construction.	Maintenance.	Construction.	
Earned in 1903, unclassified	$ 720 78		$ 516 02		$ 449 34		$ 544 04				$ 2,230 18		$ 2,230 18
Superintending, parks	1,789 58	$ 683 67	1,759 16	$ 100 00	1,729 95		1,489 26				6,767 95	$ 783 67	7,551 62
Superintending, general									$2,750 00		2,750 00		2,750 00
Conservatory and greenhouses	3,571 39		3,643 02		2,800 50		2,816 23				12 831 14		12,831 14
Outdoor gardening and forestry	4,524 87	3,478 70	3,113 29		3,139 88		3,943 56	$ 384 93			14,721 60	3,863 63	18,585 23
Lawns	12,471 28	89 54	5,984 51		6,794 56		4,489 98				29,740 33	89 54	29,829 87
Roads and drives	8,614 68	684 74	553 45		2,058 87		1,167 96				12,394 96	684 74	13,079 70
Paths and walks	3,999 66	2,399 17	2,692 33	258 46	4,777 38		1,943 26				13,412 63	2,657 63	16,070 26
Athletic fields and playgrounds	2,173 44	8 23	481 82		438 78		182 52	19 99			3,276 56	28 22	3,304 78
Buildings and pavillions	3,116 54	81 75	1,305 03		1,887 41		907 41	23 75			7,216 39	105 50	7,321 89
Policeing and gatekeeping	11,797 94		3,331 93		5,278 76		3,903 34				24,311 97		24,311 97
Live stock, stables	1,878 44		304 68		464 14		503 84				3,151 10		3,151 10
Zoological collection	3,025 27	74 87									3,025 27	74 87	3,100 14
Quarrying	5,539 83	344 20									5,539 83	344 20	5,884 03
General repairing	2,684 02	39 22	912 38		623 31		506 89				4,726 60	39 22	4,765 82
Unclassified work	673 70		1,059 97		175 01		130 76				2,039 44		2,039 44
Park concerts	1,701 88		1,701 88		1,701 88		850 93				5,956 57		5,956 57
New benches		117 39						85 31				202 70	202 70
New stable		4,432 92										4,432 92	4,432 92
Installing new scales		80 10						200 14				280 24	280 24
Excavating gas and water		875 87										875 87	875 87
Grading for new gymnasium								3,483 61				3,483 61	3,483 61
Drainage, Federal Hill				462 45								462 45	462 45
Grading, Latrobe Park				3,416 87								3,416 87	3,416 87
Wyman Park construction										13,369 39		13,369 39	13,369 39
Totals	$68,283 30	$13,390 37	$27,359 47	$4,237 78	$32,319 77		$23,379 98	$4,197 73	$2,750 00	$13,369 39	$154,092 52	$35,195 27	$189,287 79

GENERAL SUMMARY—TABLE OF ENTIRE EXPENDITURES OF THE DEPARTMENT FOR 1904.

Classification, 1904.	Salaries: Parks and Squares.		Expenses: Parks and Squares.		New Improvements.	Totals.		Grand Totals.
	Maintenance.	Construction.	Maintenance.	Construction.		Maintenance.	Construction.	
From 1903, unclassified	$ 2,230 18		$ 36 00	$ 495 00		$ 2,266 18	$ 495 00	$ 2,761 18
Superintending, parks	6,767 95	$ 783 67	1,782 69	730 44		8,550 64	1,514 11	10,064 75
Superintending, general	2,750 00					2,750 00		2,750 00
Conservatory and greenhouse	12,831 14		5,882 91	293 40	$4,411 89	18,714 05	4,705 29	23,409 34
Ontdoor gardening and forestry	14,721 60	3,863 63	1,021 79	975 05		15,743 39	4,838 68	20,582 07
Lawns	29,740 33	89 54	6,389 35	293 03		36,129 68	382 57	36,512 25
Roads and drives	12,394 96	684 74	869 02	310 96		13,263 98	995 70	14,259 68
Paths and walks	13,412 63	2,657 63	537 23	245 90		13,949 86	2,903 53	16,853 39
Athletic fields and playgrounds	3,276 56	28 22	281 60	371 55		3,558 16	399 77	3,957 93
Buildings and pavillions	7,216 39	105 50	6,660 28	627 85		13,876 67	733 35	14,610 02
Policeing and gatekeeping	24,311 97		1,797 65			26,109 62		26,109 62
Live stock, stables	3,151 10		6,614 97	566 87		9,766 07	566 87	10,332 94
Zoological collections	3,025 27	74 87	2,347 41			5,372 68	74 87	5,447 55
Quarrying	5,539 83	344 20	422 59	5 00		5,962 42	349 20	6,311 62
General repairing	4,726 60	39 22	2,796 94	78 85		7,523 54	118 07	7,641 61
Unclassified work	2,039 44					2,039 44		2,039 44
Supplies, flags, etc			88 65			88 65		88 65
Park concerts	5,956 57					5,956 57		5,956 57
New benches		202 70		872 34			1,075 04	1,075 04
New stable		4,432 92					4,432 92	4,432 92
Installing new scales		280 24					280 24	280 24
Excavating, gas and water		875 87					875 87	875 87
New gymasium, Clifton		3,483 61			720 37		4,203 98	4,203 98
Drainage, Federal Hill		462 45					462 45	462 45
Grading, Latrobe Park		3,416 87			2,287 58		5,704 45	5,704 45
Wyman Park, construction		13,369 39			2,330 75		15,700 14	15,700 14
Bulbs			900 25			900 25		900 25
Electric lighting			10,928 25	114 00		10,928 25	114 00	11,042 25
Gas, oil and naphtha			4,678 01			4,678 01		4,678 01
Telephones, parks			253 28			253 28		253 28
Monument, Washington			615 00			615 00		615 00
Sinking Fund			16 860 65			16,860 65		16,860 65
Interest, Clifton Loan			31,237 50			31,237 50		31,237 50
Interest, Patterson Loan			8,000 00			8,000 00		8,000 00
Olmsted report				3,500 00			3,500 00	3,500 00
General improvement, Druid Hill					7,368 17		7,368 17	7,368 17
	Salaries, Office.		Expenses, Office.					
Secretary-Treasurer	$1,500 00					1,500 00		1,500 00
Stenographer	900 00					900 00		900 00
Clerk	624 00					624 00		624 00
Stamps and postals			$100 00			100 00		100 00
Stationery and printing			592 33			592 33		592 33
Advertising			427 02			427 02		427 02
Subscription to papers			16 68			16 68		16 68
Directories			12 00			12 00		12 00
Telephones, office			172 00			172 00		172 00
Typewriter repairs			23 60			23 60		23 60
Sundries, washing towels			69 14			69 14		69 14
Car tickets			120 00			120 00		120 00
Expert accountant			10 00			10 00		10 00
Office furnishings			41 07			41 07		41 07
Total	$157,116 52	$35,195 27	$112,585 86	$9,480 24	$17,118 76	$269,702 38	$61,794 27	$331,496 65

PARK RECEIPTS FOR 1904.

IN DETAIL.

Railway tax	$337,213 06
Rent—Mansion (Druid Hill Park)	450 00
" Casino (Patterson Park)	420 00
" Dwelling (Druid Hill Park)	162 50
" Cottages (Clifton Park)	251 50
" Stand (Patterson Park)	180 00
" Lakes (Druid Hill Park)	350 00
" " (Patterson Park)	140 00
Sales—Horses	627 50
" Rolling stock	50 00
" Plants	138 86
" Old iron, etc	28 40
" Wood	82 00
" Sheep	115 00
" Wool	67 50
" Hay and feed	158 37
" Material and labor	1,072 76
Fines	271 00
Monument toll	844 05
Total receipts	$342,622 50

APPENDIX C

Inventories of Park Property.

Appendix C—Inventories.

LISTS OF PARKS AND SQUARES BY DISTRICTS SHOWING AREAS. *

Southern District.

Carroll	70.6 acres.	Riverside	17.2 acres.
Federal Hill	8.2 "	Swann	11.3 "
Latrobe	10.05 "	Gwynn's Falls	28.93 "
Union	2. "	Franklin	2.3 "
Wilkens Ave. (7 sqs.)	1.6 "	Liberty	.02 "
Total			152.19 acres.

Clifton District.

Clifton	252.968 acres.	Broadway (8 sqs.)	2.27 acres.
Taney Pl. (2 sqs.)	.8 "	Mt. Vernon pl. (2 sqs.)	1.4 "
Washington Pl: (2 sqs.)	.9 "	City College Lot	.14 "
Mt Royal Ter. (3 sqs)	2. "		
Total			260.478 acres.

Druid Hill District.

Druid Hill	671.2 acres.	Harlem	8.3 acres.
Perkins	1.5 "	Lafayette	2.9 "
Mt. Royal Av. (7 sqs.)	2 "	Eutaw Place (9 sqs.)	5.6 "
Park Av. extd (3 sqs.)	.7 "	Fulton Ave. (17 sqs.)	4. "
Bolton	3.52 "	Brewer	.39 "
Callow	.03 "	Linden	.01 "
Maple	.07 "	Bo-Lin	.23 "
Park Place (2 sqs)	1. "	5th Reg't Armory	.25 "
Wyman Park	52. "	Mt. Royal Triangle	.05 "
Green Spring Ave	25.5 "	D. A. R. Mont	
Total			779.25 acres.

Patterson District.

Patterson	106 acres.	E. City Springs	1.3 acres.
Madison	3.4 "	Jackson Pl	.6 "
Collington	5.3 "	Wells and McC. Mon't.	.01 "
Broadway (11 sqs.)	3 "	Battle Monument	
Johnston	2.5 "		
Total			122.11 acres.
Total, 39 parks and squares			1,314 028 acres.

*(See Table, page 78, for dates of acquisitions and cost.)

LIST OF PARKS AND SQUARES IN ORDER OF ACQUISITION, WITH DATE, ACREAGE AND COST.†

Parks and Squares.	Acquired.	Acreage.	Ground Rent.	Cost.
Mt. Vernon Squares (2)	1815	1.4		Donated
Washington Place Squares (2)	1815	.9		"
Eastern City Spring Square	1818	1.3		$15,000 00
Patterson Park	1827	106.		309,434 83
Franklin Square	1839	2.3		10,000 00
Jackson Square	1844	.6		Donated
Union Square	1847	2.		"
Broadway Squares (19)	1851	5.7		28,661 48
Ashland Square	1851	01		200 00
Madison Square	1853	3.4		30,000 00
Eutaw Place Squares (9)	1853	5.6		60,000 00
Lafayette Square	1859	2.9		15,000 00
Druid Hill Park	1860	671.2		695,154 65
Park Place Squares (5)	1860	1.7		Donated
Riverside Park	1862	17.2	$3,770 62*	77,488 78
Fulton Avenue Squares (17)	1866	4.		Donated
Harlem Park	1869	8.3		"
Wilkens Avenue Squares (7)	1870	1.6		30,000 00
Perkins' Spring Square	1873	1.5	2,052 00*	34,200 00
Mt. Royal Squares (7)	1874	2.		9,790 28
Johnston Square	1877	2.5		20,000 00
Federal Hill Park	1879	8.2		91,135 46
Collington Square	1880	5.3	960 00*	24,000 00
Liberty Triangle	1880	.02		Donated
Taney Place Squares (2)	1881	.8		"
Mt. Royal Terrace (3)	1884	2.		44,677 58
Carroll Park	1890	70.6		188,827 00
Bolton Park (Mt. Royal Station)	1891	3.52		103,433 00
Frick Triangle	1892	.05		Donated
Brewer Square	1892	.39		"
Bo-Lin Square	1893	.23		"
Maple Place	1893	.07		"
Clifton Park	1895	252.97		725,535 81
Linden Avenue Triangle	1895	.01		Donated
Green Spring Avenue	1896	25.5		"
Callow Triangle	1898	.03		"
Gwynn's Falls Park	1902	28.93		15,987 80
Latrobe Park	1902	10.05		25,000 00
Swann Park	1902	11.3		25,000 00
Wyman Park	1903	52.		Donated
Fifth Regiment Armory	1904	.25		"
City College Lot	1904	.141		"
Total Park acreage		1,314.471	Total invested.	$2,578,526 67

*Owned by Commissioners of Finance.

†Revised and Corrected from table published by the City Comptroller.

Inventory of Property.

General Office.

	December 31, 1903.	December 31, 1904.
Aquarium, large, iron stand	1	1
" small, glass globe	1	0
Ash-trays, small china	3	1
Atlas, Balto. City, 1896, copies of	1	1
" Topographical Survey, 1897, copies of	1	1
Baskets, pot covering	7	6
" waste paper	5	5
" for desks	2	2
Bell, desk tap	1	1
" electric, with indicator	1	1
Binders, loose leaf—"post"	0	5
Bookcase, glass doors, containing lot of book, maps and reports	0	1
Books, letter copying	1	1
" pay-roll copying, extra large	4	4
" minute	1	1
" file index	2	2
" scrap, for newspaper clippings	3	3
" texts upon plants, trees, etc., volumes.	4	7
" invoice for vouchers	4	4
" for accounts	6	6
" Inventory	1	1
" Letter press copying, old, lot of	1	1
" Accounting, old, lot of	1	1
" Minute, old	6	6
" Code Baltimore City, volumes	5	5
" State Laws, volumes	1	1
" Mayors Messages, volumes	6	6
" Ordinances, Mayor and City Council, volumes	5	5
" Public Laws, volumes	1	1
" Park Reports, bound, volumes	4	11
Booth for telephone (heavy oak)	1	1
Cabinets, double walnut, with glass doors	1	1

INVENTORY OF PROPERTY—Continued.

GENERAL OFFICE.

	December 31, 1903.	December 31, 1904.
Cabinets, single walnut, wardrobe	1	1
" small, walnut	1	1
" small oak cupboard	1	1
" card index	1	1
Carpet, strip of red velvet	1	1
Chairs, leather seat (Broken)	1	1
" walnut, leather seats	3	3
" heavy oak, leather trimmings	6	6
" " " " " (revolving)	9	9
" cane seat	..	6
" cane seat, revolving	3	..
" type writer, with spring back	1	1
Charter, copies of, in cloth	2	2
Clocks, automatic electric	1	1
" "Seth Thomas Regulator"	1	1
Couch, mahogany Davenport	1	1
Cuspidors, crockery	5	6
Cuts, half-tones of park views	30	30
Cushions, ordinary chair	2	2
" best leather, hair	3	3
Deeds, bound volumes of	3	3
Desks, quartered oak, table top	3	4
" roll top, oak	2	2
" typewriter, oak double	2	2
" " walnut, double	1	1
" " single, oak, tabulator	1	1
Dictionary, "Standard," with iron stand	1	1
Directory, Balto. City, 1904	0	1
Drawing Tools, set of, T Squares, Rulers and Triangles	1	1
Elk Horns (mounted) pairs of	0	1
Fans, revolving, electric	2	3
Filing Cases, large steel	1	1
" " tall, oak	1	1
" " for Maps	1	1
" " card index, oak	1	1
" " small leather for deeds	1	1

INVENTORY OF PROPERTY—Continued.

GENERAL OFFICE.

	December 31, 1903.	December 31, 1904.
Files, letter	1	1
" (Shannon)	2	2
Glasses, drinking	..	9
Globes, electric light, lots of	..	1
Ice cooler, small	1	1
Ink Wells	6	10
Jars, Mason's	..	35
Letter copying press, "Bailey's," oak stand	1	1
" " " " old, with iron stand	1	1
Mats, papier mache	15	5
Maps, Druid Hill Park	..	5
" of Baltimore (framed)	..	1
Mimeograph, "Edison's"	1	1
Mirror, with whisk and hair brush	1	1
Money-bags, black leather steel lined, new	1	1
" tan leather, worn out	1	1
Numbering machine, "Edison's Automatic"	1	1
Ornaments, Lion and Shield	0	1
" bronze	0	2
Park Views, small, kodak	..	54
Pictures, park views, black oak frames	14	14
" Palm House, Druid Hill	1	1
" Water's Park Band	1	1
" Philadelphia greenhouses	2	2
Pitchers, glass, water	1	2
Refrigerator and flower chest	1	0
Reports, of Park Commissioners, Annual, 1877 to 1902, lot of	1	1
" from Park Department of other cities, lot of	1	1
Revolver, "Smith & Wesson's"	1	1
Rods, brass, with drop lights and fixtures	3	0
Rulers, straight edge	2	2
Rules and Regulations, lots of	1	1
Rugs, Khorassen, red and blue	2	2
Safe, for matches	1	1
Screen, upright, oak frame	1	1

INVENTORY OF PROPERTY—Continued.

GENERAL OFFICE.

	December 31, 1903.	December 31, 1904.
Stamper, patent ticket, iron	1	1
Stamps, rubber, with stand	30	30
Stands, wire, for flowers	6	..
Stool, high, with revolving seat	1	2
Screw Driver	..	1
Stamp Pads	2	4
Tabourettes, oak	2	2
Tables, patent drawing	1	1
Table, quartered oak, Board	1	1
Type, rubber, fount of	1	1
Typewriters, "Remington No. 6"	3	3
" "Remington No. 8," tabulating	1	1
Umbrella Stand	..	1
Vases for flowers	3	..
Whisk	..	1

INVENTORY OF PROPERTY

Parks and Squares.

Inventory of Property.

PARKS AND SQUARES.

LIST No. 1—BUILDINGS AND IMMOVABLE PROPERTY.

ARTICLES.	On Hand December 31, 1903.					On Hand December 31, 1904.				
	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.
Boilers, stationary	3	4	3	3	13	4	3	3	3	13
Bridges	.....	.....	.....	.....	.....	12	.....	.....	1	13
Buildings, barns	1	.....	.....	.....	1	1	.....	.....	.....	1
" boat-houses	.....	.....	.....	.....	.....	.....	.....	1	.....	1
" casinos	.....	.....	1	.....	1	.....	.....	1	.....	1
" conservatories	1	2	1	1	5	1	2	1	1	5
" corn-house	.....	.....	.....	1	1	.....	.....	.....	1	1
" dwellings, brick	.....	2	1	.....	3	.....	1	1	1	3
" " frame	1	.....	.....	5	6	1	.....	.....	3	4
" " stone	1	.....	.....	.....	1	1	.....	.....	.....	1
" field houses	.....	1	1	.....	2	.....	2	1	.....	3
" gate houses	8	2	4	.....	14	.....	.....	4	1	5
" greenhouses	4	7	9	5	25	3	6	6	5	20
" hay barracks	.....	.....	.....	2	2	.....	.....	.....	.....	.....
" ice houses	2	.....	1	1	4	1	.....	1	1	3
" lake houses	1	.....	1	.....	2	1	.....	1	.....	2
" mansion	1	.....	.....	1	2	1	.....	.....	1	2
" museum	1	.....	.....	.....	1	1	.....	.....	.....	1
" observatory	.....	.....	1	.....	1	.....	1	1	.....	2
" office	1	1	.....	.....	2	1	1	.....	.....	2
" play-grounds	.....	2	.....	.....	2	.....	2	2	.....	4

Buildings, repair shops	1	.....	1	.....	2	1	1	2	.....	4
" restaurants	.....	.....	2	.....	2	.....	.....	1	.....	1
" sheds	1	6	2	3	12	3	6	2	3	14
" sheepfolds	1	.....	.....	.....	1	1	.....	.....	.....	1
" stables	3	2	1	1	7	1	2	1	1	5
" square-keepers	1	4	2	4	11	4	2	4	1	11
" tool houses	.....	2	2	1	5	3	2	1	1	7
" zoo	3	.....	.....	.....	3	3	.....	.....	.....	3
Cages, animal, large	2	.....	.....	.....	2	3	.....	.....	.....	3
" " small	6	.....	.....	.....	6	14	.....	.....	.....	14
" bird	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fountains, display	10	7	5	3	25	13	5	4	3	25
" drinking	17	10	7	2	36	20	8	8	1	37
" horse, watering	4	.....	2	2	8	4	.....	2	1	7
Furnaces	4	2	3	3	12	3	1	2	3	9
Flagstaffs	2	3	1	4	10	1	9	5	2	17
Monuments	16	1	2	1	20	16	1	2	1	20
Pavilion—music	1	4	1	.....	6	1	2	1	.....	4
" picnic	11	1	2	1	15	11	1	2	1	15
Privies, no plumbing	13	5	4	8	30	15	4	3	9	31
Pumps—cistern	.....	.....	1	.....	1	2	.....	.....	1	3
" well suction	12	3	1	4	20	8	.....	.....	5	13
Shower-baths	.....	3	4	3	10	.....	3	4	3	10
Scales, wagon platform	.....	.....	.....	.....	.....	1	1	.....	1	3
Toilets, with plumbing	.....	.....	1	.....	1	6	1	9	3	19
Urinal, with plumbing	.....	.....	.....	.....	.....	.....	1	.....	.....	1
" porcelain	.....	.....	.....	.....	.....	.....	2	.....	.....	2
Vases, ornamental stationary	76	117	89	22	304	92	91	112	26	321

INVENTORY OF PROPERTY—Continued.

LIST. NO. 2—LIVE STOCK. (See "Zoo," page 106.)

ARTICLES.	ON HAND DECEMBER 31, 1903.					ON HAND DECEMBER 31, 1904.				
	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.
Dogs	.....	.....	.....	.....	.....	2	.....	.....	.....	2
Ewes	52	.....	.....	.....	52	62	.....	.....	.....	62
Horses, driving	.....	2	1	1	4	4	1	1	1	7
" work	18	4	3	8	33	15	2	4	7	28
Mules	6	.....	.....	.....	6	4	.....	.....	.....	4
Rams	12	.....	.....	.....	12	2	.....	.....	.....	2
LIST NO. 3—TOOLS, MACHINERY, ROLLING STOCK AND OTHER PROPERTY.										
Adzes	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Anvils, blacksmith's	1	.....	2	.....	3	1	1	1	.....	3
Anvil blocks	.....	.....	.....	.....	.....	1	1	1	.....	3
Aquaria, glass, small	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Aquarium tanks	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ash cans	.....	.....	.....	.....	.....	.....	1	.....	2	3
Augers	2	7	.....	.....	9	8	9	.....	.....	17
Awls	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Awnings	.....	.....	.....	.....	.....	3	.....	.....	.....	3
Axes, broad	1	.....	.....	.....	1	1	.....	.....	.....	1
" ordinary	8	8	3	2	21	24	7	4	14	49

Axe handles	15	5	3	2	25		3		1	4
Badges	21	18	8	4	51	29	18	14	7	68
Bags								10	23	33
Bale hooks		2			2	2	1			3
Balls, cannon						21				21
" tin						2				2
Barrels	1	3	1	3	8	11	9	4	8	32
Bars, horizontal							3	10		13
" pinch	4	1	2		7	3				3
" claw		1			1	1				1
" slice	3		2		5	5	3			8
Basins, wash						1				1
" porcelain						1	3		3	7
Baskets, coal										
" oak	3	9			12	12	11			23
" rattan			2	1	3			3	1	4
" waste						1		1		2
Bellows, forge	1		1		2	1		1		2
" hand										
" powder guns	2	2	1	1	6	1	1	1	1	4
" sand						1	1			2
" spraying	1	1		1	3			1	1	1
Bells, sleigh						1				1
Bell (time), large				1	1				1	1
Belting, feet of						122				122
Belts for roller						1				1
Benches, blacksmith's						1				1
" carpenter's						3	1			4
" ordinary strip	2,638	892	961	554	5,045	2,067	700	957	352	4,076
" porch	4	2		12	18				12	12
" rustic, iron	6	16	3		25	42	5			47
" " wood							8	1		9
" no back	65	40	15		120	69		8	1	78

INVENTORY OF PROPERTY—Continued.

List No. 3—Tools, Machinery, Rolling Stock and Other Property.

Articles.	On Hand December 31, 1903.					On Hand December 31, 1904.				
	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.
Benches, 16 ft.	32	50	22	16	120	76	102	78	16	272
Bench-legs						63	45	22		130
Bench-strips	1,000	5	100		1,105	690	32		60	782
Bevels		1	1		2		1			1
Bits, carpenter's	5	16	2	9	32		15	1	8	24
" gimlet										
" screw-driver								4	2	6
Blankets, horse	3	4	4	1	12	11	2	5	6	24
Blocks, pulley		8		2	10		13		2	15
Block and tackle	1	4	2		7	5	4	2		11
Boilers, portable										
Boots, rubber										
Boxes, bear						1				1
" feed						4	2	1		7
" iron						2				2
" lamp						2				2
" statue						5				5
" tool, large						7			4	11
Braces, carpenter	1	2	1	2	6	1	2	2	1	6
" drill										
Bridles		5	6		11	34	7	7		48

Brooms, bass	23	27	.....	14	64	50	26	6	45	127
" corn	24	27	29	21	101	70	31	14	31	146
" snow	5	.....	1	.....	6	.....	.....	.....	.....	.....
" whisk	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Brushes, dusting	1	1	2	3	7	2	.....	1	2	5
" paint, fitch	3	7	.....	7	17	5	8	.....	6	19
" " flat	.....	5	2	5	12	6	4	.....	7	17
" " pencil	.....	.....	.....	.....	.....	.....	4	.....	.....	4
" " round	8	26	4	.....	38	7	8	.....	6	21
" " sash tool	5	2	.....	6	13	2	7	.....	14	23
" pipe	.....	.....	.....	.....	.....	3	1	.....	.....	4
" scrubbing	3	2	.....	.....	5	5	.....	2	.....	7
" stable	.....	2	2	.....	4	15	4	4	6	29
" stencil	.....	.....	.....	.....	.....	.....	.....	1	.....	1
" varnish	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
" white-wash	2	8	2	4	16	5	3	1	2	11
Buckets, fibre	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
" galvanized	6	12	2	6	26	33	2	2	13	50
" iron	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
" tin	.....	.....	.....	.....	.....	2	.....	.....	.....	2
" wooden	3	.....	6	3	12	8	3	.....	.....	11
Buggies, with top	.....	1	1	1	3	2	1	1	3	7
" without tops	1	1	.....	.....	2	.....	.....	.....	.....	.....
Bulb pans	.....	.....	.....	.....	.....	.....	.....	.....	78	78
Calipers	.....	.....	.....	.....	.....	2	.....	.....	.....	2
Cart-pads	.....	.....	.....	.....	.....	16	.....	3	.....	19
Carts, hand	2	1	1	.....	4	2	.....	.....	.....	2
" horse, ordinary	.....	4	3	.....	7	.....	2	.....	.....	2
" " wide tire	16	.....	.....	6	22	17	2	3	8	30
" night	1	1	.....	.....	2	1	.....	.....	.....	1
" watering	1	3	1	1	6	1	2	.....	1	4
Cart sills or shafts	7	.....	.....	.....	7	22	.....	.....	.....	22
Cases, exhibition	.....	.....	.....	.....	.....	30	.....	.....	.....	30

INVENTORY OF PROPERTY—Continued.

List No. 3—Tools, Machinery, Rolling Stock and Other Property.

ARTICLES.	On Hand December 31, 1903.					On Hand December 31, 1904.				
	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.
Cases, file						1				1
Cellar drainers		1	2		3	1	1	2	2	6
Chains, galvanized, ft. of							25			25
Chairs, arm	30			2	32	18	1		12	31
" ordinary wooden	12	79	20	25	136	5	79	26	24	134
" rocking	24				24					
" revolving	1		1	1	3	1			1	2
" other kinds	2	3		13	18		2	1	6	9
Chamois skins							1	2	1	4
Chests, clothes		1	1	1	3		1	1	1	3
" ice						1				1
" tool								2		2
Chimneys, lamp and lantern						1	7	1	9	18
Chisels, blacksmith's										
" carpenter's	1	2	1		4		2			2
" cold	6	8	1	10	25	4	14		6	24
" stone		2				1	4	8		13
Choke straps						18				18
Cleavers, meat						1	1			2
Clippers, horse		1			1	2	1			3
Clocks, alarm										

Clocks, ordinary						1			1	2
Collars, horse, ordinary	24		5		29	25	8	5	5	43
" leather driving			3		3		1	1		2
Collar pads	6	2	4		12	8	1	4		13
Combs, curry		5	6	6	17	15	4	3	6	28
" mane and tail	14	2			16		1			1
Compasses, wooden			2		2	1	4	1		6
Coolers, water	1	1		3	5	1	1		1	3
Covers, buggy		1			1	1	1		1	3
" lap	1	3	1	1	6	1	1			2
" horse, gum	2	1	2		5	1		2		3
" " felt	3		4		7					
" " oiled		2			2		3			3
Cradles, grain				2	2				2	2
Crow bars	7	19	4	3	33	13	15	4	1	33
Cultivators, hand			1	1	2			1	1	2
" horse	1	2	2	3	8	1		2	3	6
Cups, granite drinking	1	2			3					
" tin "				6	6					
Cuspidors or spittoons	25				25	24	1			25
Cutters hay										
" sod, horse			1		1		1	1		2
" " hand								4		4
Carrriage, hay						1				1
Demijohns						1	1			2
Derricks	1				1	1				1
Desks, flat top	3	2	1	3	9	5	6	4	2	17
" roll top		1		2	3		1		1	2
Dividers, compass										
Double trees	2	2	1	2	7	4	4	2	2	12
Drawing instruments										
Drays	1		2		3	1				1
Drills, blasting	16		2		18	8		3		11

INVENTORY OF PROPERTY—Continued.

List No. 3—Tools, Machinery, Rolling Stock and Other Property.

Articles.	On Hand December 31, 1903.					On Hand December 31, 1904.				
	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.
Drills, other kinds						20				20
Drill presses	1		1		2	1		1		2
Drinking glasses										
Dump-cars										
Dusting pans								1		1
Edging-irons		2		5	7				3	3
Engines, crusher						1				1
Espantoons						15	2			17
Fern-dishes										
Files, flat	4	2	1		7	5	1	4		10
" half-round										
" rat-tail										
" round										
" square		1			1			1		1
" three-cornered	6				6	2	3	1		6
Flags, regulation U. S.	1	4	1	4	10	1	2	2	2	7
Flatters, blacksmith's						2				2
Fly-nets, horses						2	1	1		4
Forges, blacksmith's	1		1		2		1	1		2
Forks, coal	2	2			4		2			2
" hay	7	1	2	2	12	22	2	1	6	31

Forks, leaf, wooden prong	6	4	.....	.....	10	.....	5	.....	.....	5
" manure	9	13	3	24	49	43	9	8	17	77
" pitch	2	2	.....	.....	4	.....	7	6	.....	13
" spading	8	8	5	3	24	13	4	4	3	24
" stone	4	.....	.....	.....	4	7	1	.....	.....	8
Fork-handles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fountain-castings	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fumigators	5	2	.....	.....	7	2	3	.....	.....	5
Fullers, blacksmith's	.....	.....	.....	.....	.....	16	.....	.....	.....	16
Funnels	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Garden lines	3	2	.....	.....	5	855	200	.....	50	1,105
Gnage glasses	.....	.....	.....	.....	.....	4	1	.....	.....	5
Gimlets	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Glass cutters, diamond	1	1	.....	1	3	1	1	1	1	4
" ordinary	.....	7	2	4	13	.....	4	4	5	13
Globes, glass	.....	.....	.....	.....	.....	5	7	6	.....	18
" arc light	.....	.....	.....	.....	.....	134	.....	52	.....	186
Grindstones, mounted	2	5	1	6	14	4	3	.....	3	10
Guards, border	.....	.....	.....	.....	.....	1,332	225	12	39	1,608
"Gym" apparatus	.....	1	1	.....	2	.....	3	45	.....	48
Halters	24	8	6	10	48	26	6	5	9	46
Halyards	2	3	1	4	10	1	3	4	2	10
Hame straps	.....	.....	.....	.....	.....	82	.....	5	.....	93
Hammers, brick	1	5	1	3	10	.....	4	.....	2	6
" carpenter's	5	4	3	1	13	.....	.....	1	.....	1
" claw	.....	1	.....	.....	1	.....	1	.....	.....	1
" masons'	.....	.....	.....	.....	.....	1	.....	1	.....	2
" sledge	1	4	3	.....	8	5	16	2	.....	23
" stone	32	10	4	.....	46	17	10	2	.....	29
" tack	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hardies, blacksmith's	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Harness, buggy	1	3	2	2	8	3	1	2	2	8
" cart	16	4	3	6	29	17	4	3	6	30

INVENTORY OF PROPERTY—Continued.

List No. 3—Tools, Machinery, Rolling Stock and Other Property.

ARTICLES.	On Hand December 31, 1903.					On Hand December 31, 1904.				
	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.
Harness, wagon, double	10	6	2	2	20	9	.....	2	2	13
" wagon, single	5	3	3	.....	11	2	3	2	1	8
Harrows, disc	.....	.....	.....	.....	.....	1	1	.....	.....	2
" ordinary	4	3	1	.....	8	4	1	3	.....	8
" spring	.....	.....	.....	1	1	1	2	.....	1	4
Hatchets	7	7	2	4	20	11	7	3	2	23
Hay carrier	.....	.....	.....	.....	.....	1	.....	.....	.....	1
" tedder	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Helmets	14	5	6	4	29	52	13	12	11	88
Hoes, scuffle	2	.....	3	4	9	4	8	5	6	23
" claw	4	6	.....	.....	10	.....	.....	12	6	18
" draw	11	.....	.....	.....	11	.....	.....	10	9	19
" garden	2	32	14	28	76	16	16	15	.....	47
" grubbing	2	.....	.....	.....	2	1	.....	.....	.....	1
" mortar	2	2	2	.....	6	5	2	1	.....	8
Hooks, ice	.....	.....	.....	.....	.....	14	.....	15	.....	29
" long-handled	2	.....	1	.....	3	.....	.....	.....	.....	.....
" tug and back	.....	.....	.....	.....	.....	3	.....	.....	.....	3
Hose, garden ¾-in. (feet)	1,450	1,900	900	1,950	6,200	2,425	1,500	925	1,620	6,470
" other sizes	175	100	36	450	761	128	285	50	450	913
" steam	25	.....	.....	.....	25	.....	.....	.....	.....	.....

Hose, couplings	1			5	6		11	6	3	20
" menders	50		2		52	24			24	48
" nozzles	2	2	2		6	2	3	1		6
" reducers						15	4			19
Houses, dog						3				3
Handles, hammer						18				18
Hooks, canting						2				2
Ice boxes						1		4		5
Jaggers	1				1	1				1
Jack-screws						2	1			3
Jars, glass, preserving								8		8
Jimmies										
Joiners, cement										
Jugs, stone										
Kegs										
Kettles, metal	1				1	1				1
Keys, fountain	12	6	4		22		7	3	3	13
" valve						6			2	8
" watering hydrant	22	12	3	7	44	34		2	12	48
Knives, budding	4		2		6					
" draw	1	1		1	3	1	1			2
" edging	6	4	4		14	7	3	4		14
" gutter	12				12					
" hay						1		6		7
" putty	4	1	2	6	13	3	2	3	4	12
" propagating										
" sodding		4	3		7		4			4
Labels, pot or plant	2,000	500		500	3,000	500	1,576	700	400	3,176
Ladders, step	2	5	2	5	14	11	6		3	20
" extension	4	1	1	1	7	4	1		1	6
" ordinary, 16-ft	2	14	5		21	9	15	8	4	36
Ladles, galvanized	39	45	16	4	104	19	23	7		49
Lamps, alcohol										

INVENTORY OF PROPERTY—Continued.

List No. 3—Tools, Machinery, Rolling Stock and Other Property.

ARTICLES.	On Hand December 31, 1903.					On Hand December 31, 1904.				
	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.
Lamps, oil	.....	1	3	1	5	7	.....	2	15	24
" Jagger or carriage	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Lanterns, ordinary hand	14	1	2	4	21	13	3	1	5	22
" signal	6	.....	.....	.....	6	1	.....	.....	.....	1
" reflector	12	6	.....	15	33	5	8	.....	.....	13
Lap robes	.....	.....	.....	.....	.....	3	.....	.....	1	4
Lathes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Levels, sight	.....	.....	.....	.....	.....	.....	1	.....	.....	1
" spirit	2	4	1	2	9	1	3	1	1	6
Mandrels	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Mats, burlap	65	45	20	23	153	57	.....	12	23	92
" door	2	.....	1	.....	3	.....	1	1	.....	2
Mattocks, with handles	6	11	6	13	36	27	6	5	11	49
" handles	.....	.....	6	18	24	.....	.....	.....	.....	.....
Mauls	3	1	2	.....	6	4	.....	3	3	10
Measures, tin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
" wooden	.....	.....	.....	.....	.....	2	.....	.....	2	4
Mortar boards	.....	.....	3	.....	3	.....	8	6	.....	14
" boxes	.....	.....	1	.....	1	.....	3	1	2	6
Mowers, hand, 14-in., 16-in.	.....	20	10	22	52	21	20	14	2	57
" " 18-in	15	.....	.....	.....	15	7	.....	.....	12	19

Mowers, field	2	.....	1	3	6	3	1	.....	3	7
" horse	2	4	2	3	11	3	5	1	3	12
Oil cans	4	14	5	.....	23	8	4	2	9	23
Oilers	7	11	8	8	34	13	.....	3	.....	16
Oil stones	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Painter's falls	2	.....	.....	.....	2	.....	.....	.....	.....	.....
Pans, agate	.....	.....	.....	.....	.....	8	.....	.....	.....	8
" feed	.....	.....	.....	.....	.....	8	.....	.....	.....	8
" zinc	.....	.....	.....	.....	.....	15	.....	.....	.....	15
" dust	.....	.....	.....	.....	.....	.....	.....	1	.....	1
" for pots	.....	.....	.....	.....	.....	12	.....	.....	.....	120
Picks	22	36	15	28	101	46	53	17	25	141
Pick handles	26	46	15	28	115	4	.....	.....	.....	4
Pile drivers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Planes, carpenter's	.....	5	1	1	7	.....	2	.....	.....	2
" jack	.....	.....	.....	.....	.....	1	3	.....	.....	4
" other kinds	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plants of all kinds, under glass	.....	.....	.....	.....	.....	65,271	46,150	61,738	35,630	208,789
Pliers or pinchers	.....	.....	.....	.....	.....	2	2	3	.....	7
Plows, one horse	1	1	1	.....	3	.....	1	1	.....	2
" two horse	.....	1	2	2	5	3	1	2	2	8
" shovel	2	.....	.....	4	6	.....	.....	.....	4	4
" snow	4	2	1	.....	7	7	2	1	1	11
Pokers, furnace	3	6	3	.....	12	3	2	3	6	14
" stove	6	.....	4	.....	10	4	.....	.....	.....	4
Post hole diggers	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Pots, flower, 2-in.	39,220	40,200	57,050	30,000	166,470	41,010	53,842	61,612	29,860	186,324
" " 2½-in.	32,820	49,400	28,500	30,000	140,720	37,726	40,792	33,654	29,780	141,952
" " 3-in.	11,800	4,200	13,840	10,000	39,840	18,739	10,678	3,166	9,870	42,443
" " 3½-in.	4,048	8,000	9 411	12,000	33,459	8,084	2,784	3,953	11,860	26 681
" " 4-in.	8,902	2,600	3,978	4,000	19,480	9,156	5,018	3,042	3,620	20,836
" " 4½-in	.....	3 000	.....	3,000	6,000	.....	1,685	.....	2,975	4,660
" " 5-in.	1,410	2,475	1,597	3,000	8,482	1,427	3,784	1,202	2,960	9,373

INVENTORY OF PROPERTY—Continued.

List No. 3—Tools, Machinery, Rolling Stock and Other Property.

ARTICLES.	On Hand December 31, 1903					On Hand December 31, 1904.				
	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.
Pots, flower, 6-in.	1,058	600	730	5,000	7,388	965	918	1,541	4,540	7,964
" " 7-in.	671	300	462	400	1,833	589	260	386	390	1,625
" " 8-in.	1,000	204	376	.....	1,580	1,074	221	332	450	2,077
" " 9-in.	25	100	159	.....	284	3	69	217	140	429
" " 10-in.	75	100	58	.....	233	157	109	123	90	479
" " 11-in.	.....	.....	2	.....	2	.....	1	26	.....	27
" " 12-in.	24	60	75	50	209	23	105	73	50	251
" " 14-in.	11	50	26	10	97	16	1	29	10	56
" " 16-in.	14	.....	20	.....	34	14	13	5	.....	32
" " 18-in.	5	.....	36	.....	41	.....	.....	6	.....	6
Pot hanger	48	.....	.....	.....	48	.....	.....	.....	.....	.....
Pot saucers	.....	.....	36	.....	36	.....	22	29	.....	51
Potting trays or boxes	450	40	75	100	665	686	416	171	138	1,411
Pruners, hand	2	9	5	2	18	.....	6	2	3	11
" tree, with pole	4	12	2	7	25	1	8	3	4	16
Pumps, force	2	.....	.....	.....	2	1	1	1	1	4
" hand spray	.....	2	1	.....	3	.....	3	1	1	5
" marine	1	.....	.....	1	2	.....	.....	.....	1	1
Punches, nail	.....	.....	.....	.....	.....	4	1	.....	.....	5
" hand	.....	.....	.....	.....	.....	10	.....	.....	.....	10
Puller, dandelion	.....	.....	.....	.....	.....	1	.....	.....	.....	1

Rakes, automatic cleaning	5	7			12	7	4			11
" horse	1		1	2	4	2		1	2	5
" steel, hand	20	16	7	23	66	29	16	6	12	63
" wire tooth	2	16	3		21		31		7	38
" wooden	11	26	11	30	78	46	7	18	36	107
Rammers, iron		5	4		9	1	3	11	1	16
" sod								2		2
" wood	1	5	4		10	6	4	4	3	17
Ranges						2				2
Ratchets	1				1			1		1
Reels, garden lines	3	3	1		7	3	2	1	2	8
" hose	2	4	2	4	12	6	6	2	2	16
" tire						1				1
Reflectors, lamp						40			6	46
Road machines						1				1
Rods, cleaning	11				11	11		1	1	13
" stadia	1				1	1				1
Rollers, hand	4	5	3	5	17	7	3	2	4	16
" horse	2	1	2	1	6	2	2	2	3	9
" indenta										
" steam	1				1	2				2
Rollers, lawn mower, hand						1				1
Rugs						1				1
Saddles, riding				1	1	2		1	1	4
Saddle pads						1		4		5
Sanitary cans		21		35	56	162	16	3	36	217
Sash, hot-bed						99	204		73	376
Sash weights						2				2
Saw blades										
Saws, carpenter's	1	5	1	1	8	3	5	2		10
" buck							1			1
" large, cross-cut	7	3	3	6	19	6	2	2	3	13
" meat						1				1

INVENTORY OF PROPERTY—Continued.

List No. 3—Tools, Machinery, Rolling Stock and Other Property.

ARTICLES.	On Hand December 31, 1903.					On Hand December 31, 1904.				
	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.
Saws, pruning	1	6	2	5	14	4	3	5	5	17
Scaffold-hooks						3				3
Scales, balance	1				1					
" platform, small	1		1		2	1		1		2
" spring	1				1	2				2
Scale weights						5	4	6	4	19
Scoops, coal	3	2	4	2	11	3	7	3	2	15
" steel, road								3	6	9
Scrapers, drag		4	2	2	8		4			4
" furnace	2	3	2		7	2	4	3	4	13
Screwdrivers	2	7	8		17	5	3	5	3	16
Scuttles, coal	12				12	2		3		5
Scythes, complete	2	10	2	9	23	6	8	2	3	19
" bramble						1	1		1	3
Scythe blades	8				8		5	4	6	15
Scythe stones	9	22	7		38	2	12	9	3	26
Seed sprinklers	2				2					
Shades, window							35			35
Shears, border	5	3	2	2	12	5	4	2	7	18
" hedge	4	8	2	8	22	7	10	4	6	27
" lopping	1	1	1	2	5	8	1	3	2	14

Shears, pruning	3	7	.....	6	16	10	7	2	.....	19
" sheep	4	11	3	.....	18	4	12	3	4	23
Shovels, long-handled	41	53	6	37	137	121	27	25	32	205
" short "	6	22	8	.....	36	27	23	7	5	62
" snow, square point	6	6	8	8	28	23	9	7	6	45
" stove	.....	.....	.....	.....	.....	.....	1	1	.....	2
Shurbs, in nursery	.....	.....	.....	.....	.....	1,168	.....	4,500	1,452	7,120
Sickles	8	4	9	15	36	8	14	10	9	41
Sieves, circular, hand	3	2	3	4	12	4	12	3	3	22
" sand screen	3	4	4	3	14	3	3	1	3	10
" soil	2	4	2	.....	8	.....	.....	2	.....	2
" stone	.....	.....	.....	.....	.....	2	1	.....	.....	3
Sign board, all sizes	.....	.....	.....	.....	.....	371	69	32	63	535
Single trees	4	6	3	4	17	10	5	3	12	30
Siphons	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Sledges, stone	3	8	1	.....	12	1	.....	2	.....	3
Sleighs	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Slopeboards	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Snathes	2	10	2	9	23	7	.....	1	14	22
Snips, tinner's	1	1	1	1	4	2	.....	1	.....	3
Spades	12	26	9	24	71	26	23	12	18	79
Sprays, whirling	.....	22	.....	.....	22	.....	35	1	.....	36
Spraying outfits	.....	1	.....	1	2	.....	2	.....	.....	2
Sprinklers, hose	12	5	8	26	51	34	.....	26	14	74
Squares, bevel	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
" steel	1	2	1	1	5	4	3	2	.....	9
" try	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
" T	.....	.....	.....	.....	.....	.....	6	3	.....	9
Stakes, flower supports	1,700	500	950	.....	3,150	2,500	1,575	1,600	4,000	9,675
Stands, flower	.....	.....	.....	.....	.....	.....	.....	8	.....	8
" for coolers	.....	.....	.....	.....	.....	.....	.....	1	.....	1
" other kinds	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Steels, butchers	.....	.....	.....	.....	.....	1	.....	.....	.....	1

INVENTORY OF PROPERTY—Continued.

List No 3—Tools, Machinery, Rolling Stock and Other Property.

ARTICLES.	On Hand December 31, 1903.					On Hand December 31, 1904.				
	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.
Stencils for signs	11	1	1	3	16	48	1	6	.....	55
Stock and dies	.....	.....	.....	.....	.....	3	.....	1	.....	4
Stone crushers	1	.....	.....	.....	1	1	.....	.....	.....	1
Stoves, coal	9	5	5	2	21	10	5	9	1	25
" gas	5	2	.....	2	9	7	2	.....	2	11
" oil	6	1	2	.....	9	2	2	.....	.....	4
" wood	1	.....	.....	1	2	1	.....	.....	1	2
Stove grates	.....	.....	.....	.....	.....	3	.....	.....	.....	3
Straight-edges	.....	.....	2	.....	2	.....	4	1	2	7
Swings	.....	.....	.....	.....	.....	25	.....	4	13	42
Swivels	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Syringes, brass	2	3	1	.....	6	2	2	2	2	8
" rubber	.....	.....	.....	.....	.....	1	.....	.....	.....	1
" tin	1	.....	.....	.....	1	.....	.....	.....	.....	.....
Stools	24	.....	.....	.....	24	74	.....	.....	.....	74
Saws, hack	7	1	.....	.....	8	.....	.....	.....	.....	.....
Tables, engineers'	1	.....	1	.....	2	.....	.....	.....	.....	.....
" extension	.....	.....	.....	1	1	.....	.....	.....	2	2
" ordinary	2	1	2	1	6	2	2	.....	.....	4
Tanks, expansion	.....	.....	.....	.....	.....	.....	2	.....	.....	2
Tape lines, linen	1	3	1	1	6	.....	3	1	1	5

Tape lines, metallic		1		1	2	2				2
" " steel								1	1	2
Tennis markers						3				3
Thermometers, hanging	9	7	6	5	27	8	10	5	7	30
" hot-bed		1		2	3		2			2
Tire benders	1				1	2				2
" shrinkers	1				1	1				1
Tongs						22				22
Tools, blacksmith's sets										
Torches, ordinary			2		2					
" painters	3			1	4			1	1	2
Traces, chains	2	8	2	2	14	6	3	4		13
Transits, engineers'	1	1		1	3	1				1
Traps, mouse										
" steel						1				1
Trees, in nursery						2,382		8	1,962	4,352
Tree climbers						2				2
Troughs, portable						3				3
Trowels, gardening	12	16	6	10	44	8	15	7	13	43
" mason	1	4	1		6		6	1	1	8
Trestles, tire						1				1
Tugs, chain	16	4		8	28	36	4	6		46
Turn tables						1				1
Tools, nail						10				10
Uniforms, summer	14	5	6	4	29	21	7	5	7	40
" winter						19	6	8	4	37
" overcoats						19	6	8	5	38
Vaporizers							2			2
Vices, bench	3	2	2	1	8	2	3	1	1	7
" hand	2				2					
" pipe						2	2			4
" saw filing									2	2
Wagons, dayton			1	1	2				1	1

INVENTORY OF PROPERTY—Continued.

List No. 3—Tools, Machinery, Rolling Stock and Other Property.

ARTICLES.	On Hand December 31, 1903.					On Hand December 31, 1904.				
	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total	Druid Hill Dist.	Southern Dist.	Patterson Dist.	Clifton Dist.	Total.
Wagons, express, with top	4	2		1	7	2	2	1	1	6
" " without top	1				1	1	1			2
" hay	1	1			2					
" lumber, two-horse	1				1	1		1		2
" manure	1			1	2			1	1	2
" watering, two-horse	10		1		11	11		1		12
" " one "								1		1
Wagon spokes	30				30	76				76
" tongues	5				5	5				5
Watering pots	9	14	15	11	49	13	15	8	5	41
Wedges, iron	1	2	2	4	9	6	4	3	10	23
Weeders	4	8	2	6	20	5	7		6	18
Wheelbarrows, iron	25	6	7	10	48	14	10	10	6	40
" wooden	7	7	9	3	26	50	6	2	4	62
Whet-stones								2		2
Whips, buggy	1	2	1		4	1		1		2
Wire cutters							1			1
" stretchers	1	1			2	1	2		2	5
Wreaths for helmets	30	3	6	4	43	24	7	6		37
Wrenches, machine			9		9		7	4	2	13
" monkey	6	6	1	1	14	7	7	2	2	18
" other kinds	7	15	9	2	33	7	6		1	14
Wheels, turntable						3				3

PROPERTY IN MARYLAND BUILDING IN DRUID HILL PARK.

One collection of stuffed birds and animals containing 820 specimens.

One case of butterflies containing 439 specimens.

One case containing 191 specimens of wood.

One case containing 398 specimens of minerals.

One case containing 13 specimens of silk and 130 silk cocoons.

Three specimens each of bark and cones from California big trees.

One case containing 1,545 specimens shells, coral, star fish, sponge, etc.

One case of large coral.

One case containing 15 specimens crabs, fish, lizards.

One case containing 26 specimens crabs, fish, lizards.

One case containing 42 specimens of minerals.

One case containing 482 birds eggs and 16 birds nests.

One case containing 92 jars of reptiles, 6 turtles and 2 Iguanas, 1 wild boar skull.

One case containing sword fish and long tailed crabs.

One case containing alligator skull, frogs, sea lion skull, whale teeth, alligators and eggs, stuffed snakes, turtles, fish, etc.

One case containing 133 specimens Indian relics.

Collection of Indian relics, 19 specimens.

One case containing 68 Indian relics.

Nine stones from "King's Highway," Ireland.

Twelve scenes in Blue Ridge Mountains.

One picture of Baltimore in 1752.

One mounted shark.

Some miscellaneous articles and curios unclassified.

DRUID HILL PARK "ZOO."

List of Birds on Hand January 1, 1904.

2 Barred owls.	20 Mixed birds.
2 Canadian geese.	10 Parakeets.
6 Cockatoos.	2 Parrots.
1 Dove.	1 Pea fowl.
3 Great horned owls.	2 Pekin ducks.
4 Macaws.	1 Snow owl.

List of Animals on Hand January 1, 1904.

1 Angora cat.	3 Mexican Burros.
1 Ant-eater.	8 Monkeys.
2 Badgers.	5 Prairie dogs.
3 Bears.	2 Prairie wolves.
2 Camels.	1 Puma.
30 Deer.	1 Raccoon.
2 Elk.	2 Sea lions.
1 Gray fox.	2 Swift foxes.
2 Gray wolves.	2 Zebus.

Donated to the Zoo During the Year 1904.

Animals.	Donated by.
4 Alligators	1 Mr. Charles L. Webster. 3 Master Laurenson Meyer.
1 Ground hog 1 Opposum	Johns Hopkins University.
4 Monkeys	1 Mr. R. L. Sledge. 3 Mr. Henry Bishop.
13 Raccoons	2 Hon. N. Chas. Burke. 11 Caught in park.
10 White rats	

Birds.	Donated by.
1 Bald pate eagle	Miss H. DaCosta.
2 Black bantams	Mr. Wagner.
1 Barn owl	Standard Furniture Co.
1 Cockatoo	Mr. Henry Bishop.
1 Dove	Miss N. DaCosta.
2 Hawks	1 Ed. G. Bradford, Jr.
4 Pea-fowls	Mrs. Herman Dubner.
3 Pekin ducks	Mr. Gail.
2 Deer	1 Sisters Notre Dame 1 Miss Louise Brown North East, Md.

1 Camel born March 15, 1904.

Died During the Year 1904.

Animals.

2 Alligators.
1 Mexican burro.
2 Monkeys.
1 Monkey taken away by owner.
1 Opossum.
1 Sea lion.

Birds.

2 Cockatoos.
2 Eagles.
2 Parakeets.
1 Parrot.
1 Snow owl.

List of Birds in Zoo January 1, 1905.

1 Bald pate eagle.
2 Bantams (black.)
1 Barn owl.
2 Barred owls.
1 Black headed nun.
2 Canadian geese.
5 Canaries.
1 Chaffinch.
5 Cockatoos.
2 Doves.
3 Great horned owls.
2 Hawks.
3 Jova sparrows.
8 Parakeets.
5 Parrots.
5 Pea fowls.
5 Pekin ducks.
4 Macaws.
5 Sparrows.
5 Strait colored junco.
1 Red bird.

List of Animals on Hand January 1, 1905.

1 Angora cat.
2 Alligators.
1 Ant eater.
2 Badgers.
3 Bears.
3 Camels.
50 Deer.
2 Elk.
1 Gray fox.
2 Gray wolves.
2 Mexican burros.
9 Monkeys.
8 Prairie dogs.
2 Prairie wolves.
1 Puma.
5 Rabbits.
10 Raccoons.
1 Sea lion.
2 Swift foxes.
10 White rats.
2 Zebus.

APPENDIX D

LAWS AND ORDINANCES

Relating to Government of Parks and Squares.

The New Charter Provisions Creating and Regulating the Department of Public Parks and Squares, as Enacted in 1898; with Amendments Enacted in 1900 and 1902.

AN ACT, approved March 24, 1898, to repeal Article 4, entitled "City of Baltimore," of the Code of Public Local Laws of Maryland, and the several Acts and parts of Acts amendatory thereof, and to re-enact said Article 4, with amendments, under two sub-titles, to be known as "Charter" and "Miscellaneous Local Laws."

SECTION 1. Be it enacted by the General Assembly of Maryland, That Article 4, entitled "City of Baltimore," of the Code of Public Local Laws of Maryland and the several Acts and parts of Acts amendatory thereof, be and the same are hereby repealed, and the said Article 4 is hereby re-enacted, with amendments, under two sub-titles, to be known as "Charter" and "Miscellaneous Local Laws," so as to read as follows:

ARTICLE IV, SUB-TITLE, "GENERAL POWERS."

SECTION 6. The Mayor and City Council of Baltimore shall have full power and authority—

* * * * * * *

PARKS—To establish, maintain, control and regulate parks or squares in the City of Baltimore for the recreation and benefit of its citizens. The resolution of the Mayor and City Council of Baltimore, appointing a Commission in relation to the proposed public parks, approved June 4, 1860 (See page 124), and the ordinance of the Mayor and City Council of Baltimore to provide for a public park or parks, approved July 21, 1860, (See page 124) are con-

firmed; and all Acts done, or which may hereafter be done, by the said Mayor and City Council of Baltimore, or the officers of said city, or the Park Commission, acting under the provisions of the said resolution and ordinance, shall have the same effect as if the said Mayor and City Council of Baltimore prior to the passage of said resolution and ordinance had been expressly empowered, by Act of the General Assembly, to enact a resolution and ordinance, and to provide for carrying the same into effect. All the rights, privileges and authority heretofore granted by ordinance to the Park Commission are hereby transferred to the Board of Park Commissioners as constituted in this Article. The Board of Park Commissioners be and is hereby authorized and empowered upon and immediately after the execution and delivery by the owners thereof of the deed hereinafter referred to, to the Mayor and City Council of Baltimore, to assume exclusive jurisdiction and control over the public highway known as Green Spring avenue road, extending from the north entrance of Druid Hill Park, through parts of Baltimore city and parts of Baltimore county, to the Western run bridge, in Baltimore county, with full power in said Board of Park Commissioners to regulate the use of the said Green Spring avenue road as a highway, and to prescribe the hours when and the manner in which manure carts, hay wagons and all or any other description of vehicles may use the same, and to prescribe fines and penalties for the violation of such regulations in the same manner as it prescribes fines and penalties for violations of public park regulations. The owners of said Green Spring avenue road are hereby authorized to grant, and the Mayor and City Council of Baltimore are hereby authorized to accept from said owners a good and sufficient deed for the bed of said road, subject to the rights of the adjacent property holders to use the same as a highway. From and immediately after the acceptance by the Mayor and City Council of Baltimore of the deed mentioned above all obligation and duty upon the part of either the owners

of the said Green Spring avenue road, or of the public authorities of Baltimore county, to keep or maintain said road in repair shall cease, and from and immediately after said time the sole obligation to keep and maintain said road in repair shall rest upon the Mayor and City Council of Baltimore. The Board of Park Commissioners, as herein provided for, shall have all the rights, powers and authority as are specifically set forth in this paragraph of this section and elsewhere in this Article, and all rights, powers and authority are hereby granted to the Mayor and City Council of Baltimore to make such other and further rules and regulations as it may deem proper for the maintenance of all parks and squares within the City of Baltimore not inconsistent with this Article.

* * * * * * *

DEPARTMENT OF PUBLIC PARKS AND SQUARES.

Section 90. There shall be a Department of Public Parks and Squares of the Mayor and City Council of Baltimore. The head of said department shall consist of a Board of Park Commissioners, composed of five members, to serve without pay, appointed by the Mayor in the manner prescribed in Section 25 of this Article, and to hold their offices as therein provided, one of whom shall be President thereof, and shall be designated by the Mayor; and said Board shall elect a Secretary, who shall be paid a salary of one thousand five hundred dollars per annum, payable monthly, and he shall be the clerk of said Board, and shall perform such duties as may be prescribed by said Board. The said Board shall perform such other duties as may be prescribed by ordinances not inconsistent with this Article.

Section 91. The Board of Park Commissioners shall have charge and control of all public parks, squares, springs and monuments belonging to, controlled by, or in the custody of the Mayor and City Council of Baltimore.

Section 92. The Board of Park Commissioners shall have power from time to time to make such rules and regulations for the government and preservation of order within the parks, squares, springs, and monuments belonging to, controlled by, or in the custody of the Mayor and City Council of Baltimore, as it may deem expedient. To carry out such regulations, fines not exceeding in any one case one hundred dollars shall be imposed for breaches of said rules and regulations, which fines shall be recoverable as other fines are in the name of the city, and said amounts so recoverable shall be used and appropriated to the purposes of the Board of Park Commissioners.

Section 93. The Board of Park Commissioners is authorized and empowered to regulate the speed of vehicles and equestrians within one mile of the approach and within the limits of said parks and squares, and to impose the fines provided for in the preceding section for the violation of any regulations it may establish in this connection, to be recovered as therein provided. (See Amendment, Chapter 92, Laws of 1902, approved March 27, 1902, page 119.)

Section 94. The several members of the said Board of Park Commissioners shall have the power of conservators of the peace within the limits of said parks and squares.

Section 95. The Board of Police Commissioners of Baltimore city is directed, at the request of the Board of Park Commissioners, to detail, from to time, such of the regular police force of said city as the said Board of Park Commissioners may deem necessary for the preservation of order within said parks and squares, according to the regulations aforesaid which policemen shall be under the direction of said Board of Park Commissioners, and shall have the same power in said parks and squares that the police of the City of Baltimore have as conservators of the peace in Baltimore city or elsewhere. (See syllabus of decision—Upshur vs. Mayor and City Council, page 120.)

Section 96. In addition to the powers now or hereafter conferred upon the Board of Park Commissioners, it is authorized to form zoological collections within the limits of said parks and squares by the purchase and collection of live, wild or other animals, for the purpose of public exhibition for the instruction and recreation of the people, with power to make contracts in regard thereto; and shall be capable at law to hold, in the name of the Mayor and City Council of Baltimore and at pleasure to dispose of gifts, devises and other property for the use of said collections.

Section 97. (As amended by Act approved March 27, 1900.) The said Board of Park Commissioners shall have full power to employ and compensate all persons whom, in its judgment, it may deem proper in maintaining and supporting such parks, squares, springs and monuments, or any other buildings, collection, garden or reservation provided for in this Article. The distribution of the Park Fund for the maintenance of the different parks and squares shall be made by the Park Commissioners, provided nothing contained in this section or elsewhere in this Article shall be taken or construed to exempt the said Board of Park Commissioners from a full compliance with all the requirements of Section thirty-six of this Article, and the said Board of Park Commissioners shall spend no part of said Park Fund, unless said expenditure is authorized and included in the Annual Ordinance of Estimates, and, provided further, that the Board of Park Commissioners who go into office on the first day of March, in the year 1900, shall make such reports to the Board of Estimates as soon thereafter as possible, which report shall include all expenditures to be made by said Board of Park Commissioners for the remainder of the current fiscal year, and the Board of Estimates shall prepare and submit to the City Council a supplemental ordinance of estimates, to include the amount which the said Board of Estimates may deem proper to be spent by said Board of Park Commissioners for the remainder of said current fiscal year.

Section 98. The night watchmen employed by the Board of Park Commissioners shall have, while on duty, the same power that police in said city have as conservators of the peace.

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Section 202. No statue, ornamental fountain, arch or gateway, monument or memorial of any kind shall be erected, nor any change made in those already erected in any public street, avenue, square, place, park or municipal building in the City of Baltimore unless the design and site of proposed change for the same shall have been submitted to the Commission and approved by a majority thereof, and its report shall have been made to the City Council; said report shall be made within thirty days from the time when the design and site or proposed change as above specified shall have been submitted to the Commission for its approval.

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Section 736. The Board of Park Commissioners, for the purpose specified in Section 96 of this Article, is empowered to form a zoological collection within the limits of any of the Parks and squares under its control.

Section 737. The said Commissioners are authorized to receive subscriptions of money for the purpose of said collection, not to exceed in amount one hundred thousand dollars, and to issue certificates of stock therefor, in sums of not less than one hundred dollars, each bearing interest at the rate of six per cent., payable half-yearly out of the income derived from said collection, which certificates shall be signed by a member of said Commissioners appointed by them for the purpose, and the Secretary thereof, and have attached thereto a seal, which said Commissioners are authorized to adopt for the purpose.

Section 738. In addition to the six per cent. interest aforesaid, each holder of a certificate shall be entitled to receive for

every one hundred dollars subscribed by him or her as many free entrance tickets to the zoological collection as the said Commissioners may deem proper.

Section 739. The Mayor and City Council of Baltimore are authorized to issue bonds or certificates of indebtedness of said corporation to an amount not exceeding one hundred thousand dollars, to be applied to the purchase of ground for and the establishment of a Park in that portion of the City of Baltimore lying west of Poppleton street and south of Franklin street in said city, which said bonds or certificates of indebtedness shall be payable at such times and bear such rate of interest, not exceeding three and one-half per centum per annum, as the said Mayor and City Council shall provide by ordinance; provided, that the said bonds or certficates of indebtedness shall not be issued unless the ordinance which the Mayor and City Council of Baltimore are authorized to enact for that purpose shall be approved by a majority of the votes of the legal voters of said city, cast at the time and place to be designated by said ordinance, in the provision for submitting the same to the legal voters of said city, as required by Section 7, Article 11, of the Constitution of Maryland; provided, however, that the said bonds or certificates of indebtedness shall not be sold for less than par, and the said Mayor and City Council of Baltimore are authorized to provide by ordinance for the laying of such an annual tax as shall be sufficient to pay the interest on said bonds or certificates of indebtedness, and provide a sinking fund for their redemption at maturity.

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Section 758. The said Board of Police Commissioners are required, on the requisition of the Board of Park Commissioners, to detail from time to time such number of the regular police force of said city as the said Board may deem necessary for the preservation of order within any parks under their control, which detailed force shall have the same powers in the premises that the police force of the city have as conservators of the peace.

Automobile Act.

AMENDING SECTION 93 OF CITY CHARTER, LAWS OF 1902, CHAPTER 92, PAGE 116.

AN ACT, To amend Article 4, of the Code of Public Local Laws of Maryland, entitled "City of Baltimore," sub-title "Charter," as amended by the Act of the General Assembly, passed at the Session of eighteen hundred and ninety-eight, Chapter 123, by repealing Section 93, and to re-enact the same, with amendments.

SECTION 1. Be it enacted by the General Assembly of Maryland, That Section 93, of Article 4, of the Code of Public Local Laws of Maryland, entitled "City of Baltimore," sub-title "Charter," as amended by the Act of the General Assembly, passed at the session of 1898, Chapter 123, be and the same is hereby repealed, and that said Section 93 of said Article 4 of the Code of Public Local Laws of Maryland, entitled "City of Baltimore," sub-title "Charter," be and the same is re-enacted with amendments, so as to read as follows:

93. The Board of Park Commissioners is authorized and empowered to regulate the speed of vehicles and equestrians within one mile of the approach, and within the limits of said parks and squares, and to impose the fines provided for in the preceding section for the violation of any regulations it may establish in this connection, to be recovered as therein provided; but the said Board of Park Commissioners shall have no authority to pass any rule or regulation excluding automobiles from the free use of the parks, squares and roadways under its control, nor shall the said Board of Park Commissioners have authority to pass any rule or regulation requiring vehicles, equestrians or automobiles to travel at a slower rate of speed than six miles per hour.

SEC. 2. And be it further enacted, That this act shall take effect from the date of its passage.

Approved March 27, 1902.

SYLLABUS OF DECISION IN 94 MARYLAND, PAGE 743, UPON SECTIONS 95 AND 758 OF CITY CHARTER.

George M. Upshur, *et al.*, the Board of Police Commissioners of Baltimore city *vs.* The Mayor and City Council of Baltimore.

Section 95 of the Act of 1898, Chapter 123 (the amended Charter of Baltimore City) directs the Board of Police Commissioners, at the request of the Board of Park Commissioners, to detail from time to time such of the regular police force of said city as the Board of Park Commissioners may deem necessary for the preservation of order within the parks and squares, which policemen shall be under the direction of the Park Board. Section 758 of the Local Law relating to said city also requires the Police Board, on the requisition of the Park Board, to detail from time to time such number of the regular police force of said city as the said Board may deem necessary for the preservation of order within the parks, which detailed force shall have the same power in the premises that the police of the city have as conservators of the peace. But this section does not place the policemen so detailed under the direction of the Park Board as Section 95 does. Both of the above mentioned sections were originally enacted when the chief park was outside the city limits and so beyond ordinary city police control, and were retained in consequent statutatory revisions. Since 1888 all the parks have been within the city limits. Section 744 of the Local Law provides that the Police Board shall at all times within the boundaries of the city preserve the public peace, prevent crime, arrest offenders, etc. Section 755 directs that police officers report to the Police Board. Under Section 6 of said Charter, and Section 759 of the Local Law, the municipal authorities of Baltimore are prohibited from inter-

ferfering with the police force, which is placed under the exclusive control of the Police Board. The Board of Park Commissioners applied in the name of the Mayor and City Council for a mandamus directing the Police Commissioners to detail and place under the direction of the Park Board eighty three men from the regular police force for the preservation of order in the parks of the city to serve all the year round, and six men to serve from May to October, held—

1. That even under said Section 95, considering alone the prayer of the petition is not proper to be granted, since that section according to its true construction only authorizes the Park Board to require the Police Board to set apart occasionally, or now and then, patrolmen for a particular service, and it does not mean that the Police Board must detail the men permanently or for the definite period of a year, as the petition asks.

2. That under Section 744 it is just as much the duty of the Police Board to preserve order in the parks as in the city, since the parks are now within the city limits, and if Section 95 be deemed as mandatory through the municipal authorities would be authorized to interfere with the exclusive control of the police force failed by Section 6 of the Charter, and Sections 744 and 759 of the Local Law in the Police Board, and the duty of that board to preserve order throughout the city, and since Section 95 if deemed as mandatory would be in conflict with these other statute provisions, the petitioners right to a mandamus is not a clear, distinct, legal right, which is the indispensable basis for such a right.

3. That Sections 95 and 758 when first adopted had relation to a different situation from the one which now exists, and when they were put side by side with others which gave in mandatory terms such plenary power to the Police Commissioners throughout the whole city, including the parks, and which denied to the city in prohibitory words any control over the police they must be treated as simply directory or

explanatory, and not as creating exceptions to the broad powers of the Police Board.

4. That the Park Commissioners are not compelled to demand a detail of policemen to serve in the parks unless there is some occasion for it, and the just relation between the occasion and number of men demanded, that the allegation of the petition in this case setting forth that the additional policemen asked for were necessary to preserve order in the parks was denied by the answer, and since there was no evidence adduced to establish this allegation of the petition the right should be refused for this reason as well as for the other reasons above set forth.

When the question is whether a statute which directs or authorizes a certain thing to be done is directory or mandatory, the mere words of the statute are not controlling. The whole surroundings, the purpose of the enactment, the ends to be accomplished, the consequences that may result from one meaning rather than from another, and the cardinal rule that seemingly incongruous provisions shall be made to harmonize rather than conflict, must all be considered in deeming whether particular words shall have a mandatory or a directory effect ascribed to them.

ORIGIN OF PARK TAX.

SECTION 14 OF ORDINANCE NO. 44, APPROVED MARCH 28, 1859.

Section 14. *And be it further enacted and ordained*, That the said association (Passenger Railway Association) shall, by their Treasurer, under oath, pay into the hands of the City Register, quarterly, one-fifth of the gross receipts accruing from the passenger travel upon said roads located within the city limits under this ordinance, or any extension of said limits which may be determined upon hereafter, the same to be applied to the establishment and improvement of the city boundary avenue, as reported at the Annual Session of the

Mayor and City Council of Baltimore in 1853, by Commissioners appointed at the Annual Session of 1851, and to the location, purchase and improvement of such park or parks as may be determined upon hereafter by the Mayor and City Council of Baltimore for the benefit of the people of said city; said park or parks not to comprise an area of less than fifty acres each, and the said Mayor and City Council shall have the power, on the completion of said improvements, to reduce the rate of fare on passenger travel to such limit within the range of one-fifth of the gross receipts of the said road as they may deem expedient and advisable, the city at the same time relinquishing her interests in the receipts from said road to the extent of said reduction on said fare.

Page 67, Ordinances and Resolutions 1858 and 1859.

ORDINANCE No. 18 OF 1860.

AN ORDINANCE RELATING TO THE PARK FUND OF THE CITY OF BALTIMORE.

Be it enacted and ordained by the Mayor and City Council of Baltimore, That the Commissioners of Finance be and they are hereby authorized and empowered to receive from the City Register the one-fifth of the gross revenue of the Passenger Railway Association, as provided for in Section 14 of an ordinance, entitled "An ordinance empowering William H. Travers, William S. Browning, William DeGoey, Robert Cathcart, Joshua B. Sumwalt, and those who are now or may hereafter became associated with them and their assigns, to build and lay down tracks for a passenger railroad on Baltimore street and other streets," approved March 28, 1859, (See page 122) and invest the same, from time to time, in Baltimore City Six Per Cent. Stock, as well as the accruing interest, as a Park Fund; said fund not to be devoted to any other purpose than the one originally designed and to be subject only to the Mayor and City Council.

Approved ———

——— ———, Mayor.

April 9, 1860. Received in the Register's Office without the Mayor's signature.

ORIGIN OF PARK COMMISSION.

RESOLUTION OF MAYOR AND CITY COUNCIL, No. 227, OF 1860.

Resolution appointing a Commission in relation to the proposed public parks:

WHEREAS, As one-fifth of the revenue from the Passenger Railway Company is to be devoted to the purchase of a park or parks for the City of Baltimore; and

WHEREAS, A considerable portion of the funds are already in the hands of the Register, and more are accruing every day; and

WHEREAS, It is fitting that some action looking to a proper selection of the park or parks, and the purchase of the same should be taken by the present Council; therefore,

Resolved by the Mayor and City Council of Baltimore, That the Mayor be and he is hereby authorized and empowered to appoint four discreet persons, who with the Mayor shall constitute a Commission to select and purchase, in the name of the Mayor and City Council, a site or sites, the number of acres, etc., for the proposed park or parks, and that said Commission shall serve without pay or emolument.

Approved June 4, 1860.

THOS. SWANN, Mayor.

Page 213, Ordinances and Resolutions 1859-60.

ORIGIN OF PARK SYSTEM.

ORDINANCE No. 60, OF 1860.

An ordinance to provide for a Public Park or Parks.

SECTION 1. *Be it enacted and ordained by the Mayor and City Council of Baltimore*, That whenever the Commissioners appointed under a resolution of the Mayor and City Council of Baltimore, entitled "Resolution appointing a commission in relation to the proposed public parks," shall certify to the Register, under their respective hands, that they have purchased the site or sites for a park or parks, describing the

same in their said certificate, and stating the price agreed to be paid therefore and the terms of sale, it shall be the duty of the said Register to issue and deliver to the said commission, certificates of stock of the Mayor and Clty Council of Baltimore, in the usual form, redeemable at the end of thirty years from the date thereof, and designated on the face of the the certificate as "Public Park Stock," for the amount of said purchase money, and in accordance with the terms of sale; which certificates of stock shall be delivered to the vendor or vendors of such site or sites, by the said Commissioners upon the conveyance to the Mayor and City Council of Baltimore of the property so purchased, and after the Counsellor of the city shall have certified to the sufficiency of the title or titles thereof; and should the said commission not be able to complete the purchase of said site or sites at one time, so as to be obliged to make several certificates to the Register; the same proceedings as those just mentioned shall be had in each and every case.

SEC. 2. *And be it enacted, and ordained* That the revenue derived and to be derived by the Mayor and City Council of Baltimore from the City Passenger Railways, be and the same is hereby pledged and set apart for the payment of the interest on the certificates of stock to be issued under this ordinance.

SEC. 3. *And be it enacted and ordained*, That one-fifth of the revenue aforesaid, remaining after the payment of the interest aforesaid, shall be invested by the Register in the stock of the City of Baltimore, as a sinking fund for the redemption of the stock created by this ordinance.

SEC. 4. *And be it enacted and ordained*, That the four-fifths of said remaining revenue, shall be paid by the Register, on the order of the said commission, as the said revenue shall be received, for the improvement and maintenance of the park or parks aforesaid.

SEC. 5. *And be it enacted and ordained*, That said commission shall make annually to the Mayor and City Council of

Baltimore, in season to be referred to in the annual message of the Mayor to the Council, a full and detailed report of their proceedings in the execution of the trust reposed in them, showing the character and quantity of the work done and moneys paid therefor, the persons in their employment, their duties and compensation, together with the plan proposed for their operations during the coming year.

SEC. 6. *And be it enacted and ordained*, That the present commission be and they are hereby authorized to take charge of the said park or parks, and the improvement and maintenance, including the preservation thereof, and to that end they are hereby clothed with all power necessary for that purpose, and may appoint and compensate such officer or officers, engineer or engineers, gardener or gardeners, and employ such laborers as they may deem proper or necessary, and with power also to appoint and compensate guardians of the said property for the preservation of order within the limits thereof.

SEC. 7. *And be it enacted and ordained*, That the Mayor of the city, for the time being, shall always be a member of the commission *ex officio*.

SEC. 8. *And be it enacted and ordained*, That the said commission shall have power and authority to dispose of, by sale or otherwise, any portion of said site or sites originally purchased which may not be necessary for the purpose of said park or parks, as well as any crop, wood, trees, or other property that may be severable from the free hold, should it become necessary, in the improvement and maintenance of said park or parks so to do, in their judgment, and to make use of the avails thereof for the use of said park or parks.

And the Mayor is hereby authorized to execute any conveyances, certified by the City Counsellor, that may be required therefor; provided, however, that the joint expenses of said improvement and maintenance shall not exceed in any year the net revenue that may be received under the

provisions of the eighth section, together with the said four-fifths of remaining revenue as set apart for this purpose in the fourth section of this ordinance.

SEC 9. *And be it enacted and ordained*, That the said Commission shall have full power to make all arrangements with proprietors in regard to division lines and enclosures, the adjusting thereof and the exchanging of property for that purpose, and in like manner the said Commission shall have power to agree for the closing of public roads, should any be found to run through said site or sites, or to make such arrangement thereof as shall enable them to have entire control of the said park or parks, the exclusion of improper parties and the general police thereof.

SEC. 10. *And be it enacted and ordained*, That in addition to the present Commission, Thomas Swann, now a member thereof, as Mayor of the city *ex-officio*, be and he is hereby appointed a Commissioner in his individual capacity.

SEC. 11. *And be it enacted and ordained*, That nothing herein contained shall be taken to authorize the payment of either salary or emoluments of any kind to the said Commissioners, or any of them.

SEC. 12. *And be it enacted and ordained*, That should any vacancy occur in said Commission from death, resignation or failure to serve, the same shall be filled by the said Commission itself, and be by them reported to the Council for and subject to its approval at the first session thereafter.

THOS. SWANN, Mayor.

Approved July 21, 1860.

FIFTH REGIMENT ARMORY.

ORDINANCE NO. 85 OF 1904.

An ordinance to authorize the Board of Park Commissioners, with the consent of the Board of Trustees of the Fifth Regiment Armory, to maintain the parking along Preston street on the south side of the Fifth Regiment Armory.

SECTION 1. *Be it ordained by the Mayor and City Council of Baltimore*, That the Board of Park Commissioners be and they are hereby authorized, with the consent of the Board of Trustees of the Fifth Regiment Armory, to maintain the parking along Preston street, on the south side of the Fifth Regiment Armory, in such manner as other or similar parking belonging to the Mayor and City Council, is now or may be hereafter maintained.

Approved May 31, 1904.

E. CLAY TIMANUS, *Mayor.*

CITY COLLEGE GROUNDS.

ORDINANCE NO. 96, OF 1904.

An ordinance to authorize the Board of Park Commissioners to maintain the parking on the north side of the Baltimore City College building, extending from the west side of Howard street to the western extremity of said building.

SECTION 1. *Be it ordained by the Mayor and City Council of Baltimore*, That the Board of Park Commissioners be and they are hereby authorized to maintain the parking on the west side of Howard street and extending along the north side of the Baltimore City College building, in such manner as other or similar parking belonging to the Mayor and City Council is, now or may be hereafter maintained.

Approved June 16, 1904.

E. CLAY TIMANUS, *Mayor.*

WYMAN PARK EXTENSION.

ORDINANCE NO. 150, OF 1904.

An ordinance to amend and re-enact Ordinance No. 163, Ordinances 1902-1903, approved May 11, 1903, entitled "An ordinance to provide for acquiring by the Mayor and City Council of Baltimore by purchase or condemnation, the title

to a lot or lots of ground lying and being in the City of Baltimore, State of Maryland, situated along the Valley of Stony Run, between Merryman's lane and West Twenty-ninth street, as Twenty-ninth street extended would cross Stony Run and beyond Twenty-ninth street, and along Cedar avenue, to constitute with the lands to be donated by the Johns Hopkins University to the Mayor and City Council of Baltimore an addition to Wyman Park and a parked way connecting Wyman Park with Druid Hill Park.

Be it ordained by the Mayor and City Council of Baltimore, That Ordinance No. 163, Ordinances 1902-1903, approved May 11, 1903, and entitled "An ordinance to provide for acquiring by the Mayor and City Council of Baltimore by purchase or condemnation, the title to a lot or lots of ground lying and being in the City of Baltimore, State of Maryland, situated along the Valley of Stony Run, between Merryman's Lane and West Twenty-ninth street, as Twenty-ninth street extended would cross Stony Run, and beyond Twenty-ninth street and along Cedar avenue, to constitute with the lands to be donated by the Johns Hopkins University to the Mayor and City Council of Baltimore, an addition to Wyman Park, and a parked way connecting Wyman Park with Druid Hill Park," be and the same is hereby amended and re-enacted to read as follows:

SECTION 1. The Board of Park Commissioners are hereby authorized and directed to purchase and acquire a lot or lots of ground not less in all than one hundred and fifty acres lying and being in that part of Baltimore city and Baltimore county, State of Maryland, situated along and in the Valley of Stony Run, and on the hills adjacent thereto, between Jones Falls and the northern boundary line of the City of Baltimore, and extending in Baltimore county as far as Belvidere avenue, and lying and on each side of Cedar Run avenue, easterly from the bridge on said avenue over Jones Falls and lying between the land so to be taken along the

Valley of Stony Run and the hills adjacent thereto and Wyman Park, so as to provide a parkway or avenue from some point near the southern end of the bridge of the United Railways and Electric Company easterly to Wyman Park, the exact location within said limitations and the exact location of the said parkway or avenue to be determined by the Park Commissioners, to constitute an addition to Wyman Park.

SEC. 2. If, in furtherance of this purpose, the Park Commissioners are unable to acquire from the owner or owners the title to such ground as lies within the City of Baltimore, or any part thereof, by agreement, or if such owner or owners are at the time of such application under age, *femme covert*, *non compos mentis*, the unknown heirs of some deceased person or persons, non-residents of the City of Baltimore, or under disability to contract they shall have power to condemn the same. In cases of such condemnation the course of proceeding shall be as follows: A petition shall be filed in the Baltimore City Court in the name of the Mayor and City Council of Baltimore, setting forth a description of the land proposed to be acquired, together with the statement that the said land is desired, in part or whole, for the establishment of a Park, and that the said Park Commissioners are unable to agree with the owner or owners thereof, or some of them, or that one or more of said owners are under age, *femme covert* or *non compos mentis*, the unknown heirs of some deceased person or persons or non-residents of Baltimore City or under some legal disability to contract, and said petition shall contain a prayer that the court will have same condemned; the court shall thereupon pass an order requiring the owner or owners, or supposed owner or owners of the property, and the husband and wife, respectively, of those who may be named to be summoned, the summons to be served by the Sheriff, and to be returned by some day to be named in said order, not less than ten or more than twenty days from the date of the

filing of the said petition; or if the said owner or owners are non-residents of the City of Baltimore, or are the unknown heirs of some deceased person or persons, the court shall order the Sheriff to set up a copy of the summons upon the property, and shall order a notice to the said non-resident or residents, or unknown heirs of such deceased person or persons, to be published twice a week, for four successive weeks, in two daily newspapers, published in the City of Baltimore, requiring them to appear in the said court and to defend their interests on or before some day named in the order, which day shall not be less than six weeks, or more than eight weeks from the day of the filing of the petition to condemn. Upon the return of the said summons, or upon the expiration of the time prescribed in the said order of publication, or upon the appearance of the said owner or owners, or supposed owner or owners of said property, the court shall hear and determine any reason that may be alleged why the said property shall not be lawfully condemned for the purpose set forth, and if it appears to the court that any such owners or reputed owners are under any legal disability to make his, her or their defense, the court shall either authorize their duly constituted guardian or committee to appear and defend for them, or shall appoint some suitable person as guardian *ad litem* for them to appear in their name and defend their rights. If the court shall determine that the property is not subject to condemnation at all, it shall quash the petition; if it shall determine the proceedings are void for want of a proper notice or summons, which has not been cured by the appearance of the owner or reputed owners, it shall order a resummons or republication of the order of notice. The Court shall at any time have power to permit any amendments in matter of form, if there be no objection to the condemnation of the said property; or if the Court shall decide against the validity of any such objection, as may be alleged, it shall order and adjudge that said property be subject to condemnation and refer the assessing of the value of the same to the Park Com-

missioners to make an award of the value of the said lot or portion of ground, and of the interest of the several owners. As soon as conveniently may be, the said Park Commissioners shall assess the value of the property sought to be condemned, in fee simple, and apportion the same among the owners of the different estates therein, according to the value of their respective interests, and return to the Baltimore City Court their award of the value of the said property, and of the respective interests of the several owners thereof, under their hands, and give notice by advertisement, twice a week, for one week, in two of the daily papers of Baltimore city, that such award has been returned to the Baltimore City Court, and that all persons having an interest therein may show cause, if any they have, why the same should not be confirmed during the ten days succeeding the filing of said award, subject to exceptions. Either the Mayor and City Council of Baltimore, or any owners or reputed owners of any interest in the lot of ground sought to be condemned whether they have previously appeared to the said petition or have been made a party thereto or not shall have the right to file exceptions to said award and pray a jury trial on the hearing of said exceptions, and upon said exceptions being filed, the Court shall, as soon thereafter as conveniently may be have the same heard, tried and determined in Court before a jury in the same manner as appeals in street cases are now heard, except that there shall be no appeal to the Court of Appeals, and that all the taxed costs of such appeal shall be paid by the Mayor and City Council of Baltimore after the confirmation of all the awards of the Park Commissioners to which there are no exceptions, and after the rendition of the verdicts by the juries and the approval thereof by the Judge of the Baltimore City Court. In all cases where there are such exceptions or appeals or after judgment rendered by the Court upon exceptions and appeals, when no jury trial is requested, the said Mayor and City Council of Baltimore shall either pay to the owners of said lots the amount awarded by the jury or Park Commis-

sioners or pay the same into the Clerk's office of the Baltimore City Court for the use of the respective owners of said lots of ground, or of the respective interests therein, and thereupon the Mayor and City Council shall be vested with the fee simple title of such lots.

SEC. 3. The cost of acquiring said property in fee simple and all expenses attending such purchase and condemnation as the case may be, not to exceed one hundred thousand dollars, shall be taken from any balance of the sum of one million dollars of bonds set apart to be used by the Park Commissioners for the condemnation of the property known as Clifton as a public Park and the purchase of other property for parks by Ordinance No. 137, of the Mayor and City Council of Baltimore, approved October 5, 1894, and after providing for any other parks or additions to parks heretofore directed by existing ordinances of the Mayor and City Council of Baltimore, to be made out of said sum of one million dollars, and also shall be taken from any sum or sums heretofore appropriated by any ordinance to be taken out of any balance of said one million of dollars of bonds which ordinance or ordinances may be repealed by ordinance of the Mayor and City Council of Baltimore. And the Commissioners of Finance are hereby directed to issue and sell so much of the said registered stock or bonds of the city, as may be requisite for the purpose, and pay the proceeds to the City Register, to be applied on the warrant of the Comptroller of the City to the above named purpose and to no other purpose whatsoever.

SEC. 4. That the amount of one hundred thousand dollars, or so much thereof as may be necessary, appropriated by this, ordinance, shall be taken from said loan, and that out of said sum of one hundred thousand dollars the cost and expenses of the examination of the titles by the City Solicitor to any property acquired for the purpose of this ordinance shall be paid.

Approved November 10, 1904.

E. CLAY TIMANUS, *Mayor.*

Million Dollar Loan.

LAWS OF 1904, CHAPTER 338, PAGE 598.

AN ACT to authorize the Mayor and City Council of Baltimore to issue the stock of said corporation to an amount not exceeding one million dollars for the extension of the present park system of the City of Baltimore, and for the development and improvement for park purposes of the lands over which it shall be so extended, in such manner as the Mayor and City Council of Baltimore shall by ordinance prescribe; to authorize the submission of an ordinance to that end to the legal voters of said city; to empower the Mayor and City Council of Baltimore to acquire, by condemnation or otherwise, within the City of Baltimore, and Baltimore, Howard and Anne Arundel Counties, such lands or properties as may be necessary for the purposes of such extension; to develop and improve the same for park purposes, without regard to the provisions of Section 840 of Article 4, entitled "City of Baltimore," of the Code of Public Local Laws of Maryland, as amended by Chapter 453 of the Acts of the General Assembly of Maryland, Approved April 8, 1902.

SECTION 1. *Be it enacted by the General Assembly of Maryland*, That the Mayor and City Council of Baltimore, be and it is hereby authorized to issue its stock to an amount not exceeding one million dollars, said stock to be issued from time to time as the Mayor and City Council of Baltimore shall by ordinance prescribe, and to be issued for such amounts and to be payable at such time, and to bear such rate of interests as the Mayor and City Council of Baltimore shall by ordinance provide; and the proceeds thereof to be used for the extension of the present park system of the City of Baltimore, and for the development and improvement for park purposes of the land

over which it shall be so extended, in such manner as the Mayor and City Council of Baltimore shall, by special ordinance or ordinances, or by the annual Ordinance of Estimates prescribe; but said stock shall not be issued in whole or in part unless the ordinance of the Mayor and City Council of Baltimore providing for the issuance thereof, shall be submitted to the legal voters of the City of Baltimore at such time and place as may be fixed by said ordinance, and be approved by a majority of the votes cast at such time and place, as required by Section 7 of Article 11, of the Constitution of Maryland.

SEC. 2. *And be it enacted*, That the Mayor and City Council of Baltimore, acting by and through the agency of of the Board of Park Commissioners, may acquire, by gift, purchase, lease, whatever the duration of the lease, or other like methods of acquisition, or by condemnation, any lands situate wholly or partly within the City of Baltimore, or within the counties of Baltimore, Anne Arundel and Howard, or any interest, franchise, easement, right or privilege therein, which may be required for the purpose of extending said park system, as aforesaid, or any part or parts thereof; and when and so often as resort shall be had to condemnation proceedings, the procedure shall be that marked out by Sections 248 to 253 inclusive, of Article 23 of the Code of Public General Laws of Maryland, relating to the condemnation of property by corporations, or, so far as the acquisition by condemnation of any such land situate wholly or partly within the City of Baltimore, or any interest, franchise, easement, right or privilege therein is concerned, may, in such case or cases, at the option of the Board of Park Commissioners, be such as may now or at any time hereafter provided for by any lawful ordinance or ordinances of the Mayor and City Council of Baltimore adopted pursuant to the powers conferred upon it by Section 6, of Article 4, entitled "City of Baltimore," of the Code of Public Local Laws of Maryland, title "Federal Powers," sub-title "Condemnation of Property," for the condemnation of any land or property or interest therein

situate wholly or partly within the City of Baltimore, or such as may be provided for the very purpose of any lawful ordinance or ordinances of the Mayor and City Council of Baltimore, which said ordinance or ordinances the said Mayor and City Council of Baltimore is hereby fully authorized to adopt; provided, provision is made therein for reasonable notice to the owner or owners, and for appeals to the Baltimore City Court by any person interested, including the Mayor and City Council of Baltimore, from the decision of any commissioners or other persons, appointed to value any such lands or interest, franchise, easement, right or privilege therein.

SEC. 3. *And be it enacted*, That in developing and improving any land acquired as aforesaid for park purposes, the Mayor and City Council of Baltimore shall be free from the restriction created by Chapter 453 of the Acts of the General Assembly of Maryland, approved April 8, 1902.

SEC. 4. *And be it enacted*, That the interest on the loan authorized by this Act, and the sinking fund for the redemption of the said loan, shall be taken out of the receipts from the park tax on the street railway companies of Baltimore city, and not from the proceeds of the General Tax Levy.

SEC. 5. *And be it enacted*, That the Mayor and City Council of Baltimore are hereby authorized and empowered to expend equally the proceeds of the loan authorized by this Act in the acquisition of land in the four sections of the city and suburbs indicated by the intersection of Charles and Baltimore streets.

SEC. 6. *And be it enacted*, That this Act shall take effect from the date of its passage.

Approved April 7, 1904.

APPENDIX E

Rules and Regulations for the Government of the Parks and Squares.

(Revised 1904.)

Rules and Regulations for the Government of the Parks and Squares of Baltimore.

PUBLIC PARK REGULATIONS.

I.

The public parks being the property of the people, shall be open to all persons upon absolutely equal terms.

II.

No special privilege, except as hereinafter provided for, shall be given for any purpose whatever.

PUBLIC PARKS—RULES AND REGULATIONS.

1. No person or persons shall have or give any theatrical entertainment, nor shall any parade, procession, public gathering or public meeting of any kind take place in any public park unless authorized by the Board of Park Commissioners, under a penalty of a fine of not less than fifty dollars, nor more than one hundred dollars, to be forfeited and paid by the person in charge of said theatrical entertainment, parade, procession, public gathering or public meeting of any kind violating this rule in whole or in part.

2. No person shall post or display any sign, banner or advertisement, write upon, cut, mutilate or deface any building, bench, statue, ornament or tree, nor use in an improper way any water-closet in the public parks, under a penalty of not less than five nor more than ten dollars for each and every offense.

3. No person shall in any manner injure the enclosures of said parks, under penalty of a fine of five dollars for each and every offense in addition to the cost of repairing the injury,

4. No person shall make a fire for any purpose within the bounds of said parks, under a penalty of a fine of five dollars for each and every offense.

5. If any person shall carry or discharge any firearm within the public parks, such person shall forfeit and pay five dollars for each and every offense.

6. No person shall enter a water closet set apart for the use of the opposite sex, under a penalty of a fine of not less than five nor more than ten dollars for each and every offense.

7. Each and every person guilty of impropriety of conduct, or who shall commit any offense against decency or good morals in said parks, shall forfeit and pay a fine of not less than five nor more than fifty dollars for each and every offense.

8. No person shall curse or swear, or use abusive language, or fight, or throw any missile, or behave in a disorderly manner in said parks, under penalty of a fine of five dollars for each and every offense.

9. Gambling in any form, or playing cards in said parks, is prohibited under penalty of a fine of five dollars, to be forfeited and paid by each one of the parties engaged in the game.

10. No person shall have spirituous, malt or fermented liquors in any of said parks, nor in any of the squares, roads or places, now or hereafter under the jurisdiction of the Board of Park Commissioners, either for his own use or for sale, nor use, sell or give away the same, under a penalty of a fine of not less than five dollars for each and every offense.

11. Any person found intoxicated in said parks shall forfeit and pay a fine of five dollars for each and every offense, and the gatekeepers are directed to prevent the ingress of such persons.

12. No person shall chase deer, set snares or traps for catching squirrels, rabbits, birds or fish within said parks,

under penalty of a fine of five dollars for each and every offense.

13. No person shall injure, molest or disturb any animal kept within the said parks, either for use or for the entertainment and instruction of the public, or for any purpose, nor shall any person give or offer, attempt to give to any such animal, tobacco or other noxious article, or anything prohibited, nor feed fish or throw stones or rubbish of any kind into any lake or pond, or on any road of said parks, under penalty of a fine of not less than five nor more than twenty dollars for each and every offense.

14. No person shall foul in any manner any spring or water course, or bathe or wash in any lake, pond, spring or fountain of said parks, under penalty of a fine of not less than five nor more than ten dollars for each and every offense.

15. No person shall climb a tree nor attach a swing to any tree, nor remove or change any bench or seat from its place in said parks, under penalty of a fine of five dollars for each and every offense.

16. No person shall stand, slide, sit or roll upon any slope of said parks, or otherwise injure or deface the same by throwing anything thereon or down the same, under a penalty of a fine of five dollars for each and every offense.

17. No person shall open any of the cases, or handle any of the contents of said cases, or disturb in any way the collection of articles of interest or of natural history contained in the Maryland Building at Druid Hill Park, or that may now or hereafter be contained in any of the public parks, under penalty of not less than five nor more than fifty dollars for each and every offense.

18. No person shall trespass on ground guarded by rail, or stand or sit upon any of the low guard fences or inclosures, or other fences in any of the Parks, under a penalty of not less than five nor more than twenty dollars for each and every offense.

19. Hitching posts having been provided, no person shall fasten a horse to a tree, or leave the same unattended, or be permitted to bring led horses within the limits of said Parks, or a horse that is not harnessed or attached to a vehicle, or mounted by a rider, or a horse ridden for other than pleasure purposes, under penalty of a fine of five dollars for each and every offense.

20. No person, whether living within the limits of any of the parks or outside of them, shall permit their chickens or other fowls to run at large in the Parks, under penalty, after one warning, of five dollars for each and every offense.

21. If any cattle, hogs, horses, sheep, goats, dogs or other animals, shall be found trespassing within the confines of any of the public parks or squares, the same shall be impounded, and their owner or owners shall forfeit and pay, with the cost of maintenance of the same, a fine of five dollars for each and every offense.

In the case of dogs their entry shall not be considered a trespass provided they be secured by a collar with chain or cord always attached, and always held in the hand of the owners or attendants, or provided they be in pleasure vehicles.

22. No person shall pull any flowers or fruit, whether wild or cultivated, cut down or girdle any tree or sapling, break limbs or branches of trees, or bark trees, or injure any shrubbery or plants whatever in said parks, under penalty of a fine of not less than five dollars nor more than one hundred dollars for each and every offense.

23. No person shall handle or disturb plants in any conservatory, greenhouse, propagating house or nursery in any of the public parks, under penalty of a fine of not less than five dollars nor more than fifty dollars for each and every offense, and no flowers either cut or uncut, or plants of any kind, shall be removed from any park, propagating or green-

house under the control of the present Park Board without an order of the Board signed by the President.

24. No person shall set up any booth or table for the "sale" of any article whatever unless by the permission of the Superintendent of the park for such times as he may consider proper, nor shall any person ask or solicit pecuniary assistance or aid in said parks, under penalty of a fine of five dollars for each and every offense.

25. No picnic shall take place in the said parks without a written permit first obtained from the Local Superintendent in charge of said parks, in which shall be designated the place where it is to be held. If any person shall attempt to hold a picnic without such permit such person shall forfeit and pay a fine of five dollars.

Note A. Picnics permitted in said parks for Sunday and secular schools must always be accompanied by their respective teachers and masters, who will be held personally responsible for all infringements by the scholars of these Rules and Regulations, in the penalties severally prescribed herein.

26. No person shall disturb any picnics in said parks, or intrude him or herself without the consent of those in charge of it, under a penalty of a fine of five dollars for each and every offense.

Note B. Parties holding picnics in the said parks are expected to clean up the ground that has been occupied by them on quitting it, and not leave paper to be blown about.

Note C. The experience of the Commission renders the enforcement of the above Regulations in regard to picnics indispensable to the preservation of the property and the comfort and protection of the visitors.

27. No game of base ball, foot ball or other field game shall take place in the said parks without written permission for the purpose having been first obtained from the Local Super-

intendent in charge of the park, and no person shall practice ball or intrude himself upon the players while the game is in progress, under penalty of a fine of five dollars for each and every offense.

28. All vehicles other than pleasure carriages, as distinguished from wagons, carts and drays, are prohibited within said Parks, except when employed in the business of the Parks, under penalty of a fine of five dollars for each and every offense.

Carriages or vehicles of any description, being used for funeral purposes, whether following a hearse or following one after the other in funeral procession, and all carriages or other vehicles unoccupied, or occupied for any other than pleasure purposes, are hereby expressly declared not to be pleasure carriages within the meaning of this rule.

29. (Repealed.)

30. No person shall ride or drive upon the grass, footways or elsewhere than on the roads for the use of carriages, equestrians and cyclers in the said parks and squares, under a penalty of a fine of five dollars for each and every offense.

Horseback-riding will, however, be permitted during all daylight hours through the woods of Druid Hill Park and also over the turf of the large field to the north of the Pumping Station to the west thereof, and over the ground from the present bridle path coming up to the large tree on the hill opposite the Superintendent's residence to the intersection with the roads running to the Green Spring avenue and the Pimlico gates; also over the ground westerly from the intersection of the road and bridle path at present used, running northerly through the woods to the high service reservoir.

31. No person shall drive or ride a horse or cycle faster than at the rate of *eight miles an hour* in said park, under penalty of a fine of five dollars for the first offense and twenty dollars for each succeeding offense.

Note D. When carriages, equestrians or cyclers meet, they shall respectively keep to the right as the law of the road.

32. Bicycles and tricyles, when ridden, shall be strictly confined to the roadways in the parks, and shall be controlled by the same rules as govern horsed vehicles and equestrians, and shall keep and pass to the right when meeting the same; and when passing a carriage or equestrian from the rear such passing must be on the left side and at a moderate speed. Bicyles and tricycles shall not travel at a speed faster than eight miles an hour, nor more than two abreast; in all cases they shall be required to have attached to their bicycles or tricycles a suitable bell; they shall, when riding, also be required to carry a lantern and display a light therefrom in front, from one-half hour after sunset, under a penalty of a fine of five dollars for each and every offense.

Bicycles and tricycles may be trundled through the public parks at all hours on the walks or in the roads, provided that at no time shall two or more bicycles or tricycles be trundled abreast, under penalty of two dollars fine for offender.

Owing to danger and accidents of daily occurrence, all persons desiring to be taught to ride a bicycle or tricycle may receive instructions only on the Mall, in Druid Hill Park, and such places in other parks as may be designated.

Coasting on bicycles and tricycles is positively prohibited within any of the public parks between the hours of 12 noon and 9 P.M. A violation of this rule will subject the offender to a fine of not less than two dollars nor more than five dollars for each and every offense.

I. Coasting will not be permitted at any time on any roads in the public parks, except on bicycles and tricycles equipped with an efficient brake.

II. No bicycle or tricycle shall have attached to it more than one bell, which bell shall not be more than three inches in diameter.

III. No bicycle or tricycle shall have attached to it any device capable of producing an unusual or objectionable sound.

IV. Riding crosswise on the roads, and curving to and fro, is forbidden, and a hold on the handle bar must be constantly maintained while in motion.

A violation of the four immediate preceding rules, or any of them, will subject the offender to a fine of two dollars for each and every violation.

33. Vehicles of every description, drawn or propelled by any power, shall, unless provided with a proper light attached to the left hand side of the vehicle, from one-half hour after sunset till midnight be restricted to use the following roads and drives lighted by electricity, to wit:

Beginning at the entrance to Latrobe avenue; thence to the road generally known as South drive; thence along the said South drive to a point where it intersects the Lake drive, and thence along the direct road on the south side of Druid Lake to Swann avenue, with the right of egress and ingress to and from Eutaw Place entrance and the Madison avenue entrance, and thence northerly along Swann avenue to the Washington statue, and thence along the road generally known as the Pimlico drive to the Reisterstown turnpike, with the right of egress and ingress to and from Druid Hill avenue entrance.

Also beginning at the point as aforesaid, made by the intersection of the Lake Drive and the South Road Drive on the south side of Druid Lake, and thence along the road generally known as the Lake Drive, encircling Druid Lake, to the place of beginning.

A violation of this rule will subject the offender to a fine of five dollars for each and every offense.

34. Hereafter no manure cart or hay wagon, or any other than pleasure vehicles, shall use the Green Spring avenue road at any other hours than the hours commencing at 12 o'clock midnight and ending at 6 o'clock A.M.

A violation of this rule shall subject the offender to a fine of five dollars for each and every offense.

35. No person shall coast, slide or ride down any of the hills or inclined surfaces of the Green Spring avenue road upon any toboggan, sled, hand-sled, sledge, double-decker, or other vehicle on runners, designed or used for travel upon snow and ice with its own momentum, and without being drawn by animal or other power, under a penalty of a fine of five dollars for each and every offense.

By order of the

Baltimore, 1904. BOARD OF PARK COMMISSIONERS.

APPENDIX F

HISTORICAL DATA

Relating to Parks and Squares, Contained in Laws and Ordinances of the Mayor and City Council of Baltimore.

Historical Data Contained in the Ordinances and Resolutions of the Mayor and City Council of Baltimore, from 1812 to 1905, in Regard to Public Parks, Squares and Monuments.

GENERAL.

ORDINANCE No. 25, of 1812, authorized the commissioners appointed to superintend the "City Springs," to make rules and regulations for the preservation of property and other purposes.

Approved March 20, 1812.

(Note.—The planting of trees and other adornment about the "City Springs" was the real beginning of the Park System of Baltimore.)

ORDINANCE No. 37, of 1829, authorized the appointment of a keeper of the public square on "Hampstead Hill."

Approved April 6, 1829.

ORDINANCE No. 26, of 1835, authorized the City Commissioners to take charge of a park on Market street at "Fell's Point" and prohibit "injury to trees planted or to be planted."

Approved April 20, 1835.

RESOLUTION No. 139, of 1844, authorized the erection of a fence around a public square on "Loudenslager's Hill."

Approved April 16, 1844.

ORDINANCE No. 18, of 1860, creates the "Park Fund" of the City of Baltimore, "said fund not to be devoted to any other purpose than the one originally designed."

(Received in the Register's office without the Mayor's signature April 9, 1860).

RESOLUTION No. 382, of 1872, related to the use of the "Park Lamp" in public squares.

Approved October 29, 1872.

RESOLUTION No. 100, of 1874, provides for the collection of the Park Tax due the City of Baltimore from the City Passenger Railway Companies.

Approved March 9, 1874.

RESOLUTION No. 131, of 1874, relates to the abatement or repeal of Park Tax.

Approved March 17, 1874.

ORDINANCE No. 107, of 1876, provided for the condemnation for public use of the triangular piece of ground, bounded by Oliver street (now Mt. Royal avenue), McMechen street and Northern avenue, as per plat deposited with the City Register.

Approved June 5, 1876.

All the railings were removed under Resolution No. 28, June 8, 1876, and Resolution No. 95, March 25, 1878.

RESOLUTION No. 248, of 1881, relates to the lighting of the public squares with electricity.

Approved June 24, 1881.

ORDINANCE No. 14, of 1891, provides for the expenses of all the parks and public squares out of the Park Fund.

Approved March 24, 1891.

ORDINANCE No. 84, of 1891, authorizes the cost of any additions to any of the public parks, whether acquired by purchase, agreement or condemnation, to be paid out of moneys now remaining in the sinking fund derived from the revenues from the City Passenger Railway Companies, commonly called the Park Tax.

Approved May 20, 1891.

RESOLUTION No. 98, of 1894, requests the city representatives in the General Assembly of Maryland to oppose any change in the Park Tax.

Approved March 20, 1894.

ORDINANCE No. 14, of 1896, repeals Sections 3, 4, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 22, 24, 25, 26, 28, 29, 31, 32 and 33A of Article 46, Baltimore City Code of 1893, title "Squares, Springs and Monuments," sub-title "Commissioners and Keepers of Squares

and Springs"—Ashland Square, Baker Circle and Fulton Avenue Squares, Broadway Squares, Eastern City Spring, Eutaw Squares, Harlem Park, Jackson Square, squares around Washington Monument, Park Place, Perkins' Spring Square, public walk on Oliver street, Taney Place, Collington Square and Mt. Royal Avenue Square—and also Section 20 of Article 37, as the same was enacted by an ordinance of the Mayor and City Council of Baltimore, approved April 20, 1893, and to re-enact certain of the same, with amendements.

Approved March 9, 1896 (over Mayor's veto).

ASHLAND SQUARE.

(Wells and McComas Monument.)

ORDINANCE No. 49, of 1851, authorized the Mayor and City Council to receive the title to the lot of ground now known as "Ashland Square."

Approved May 28, 1851.

ORDINANCE No. 140, of 1853, directs the improvement of the "octagon enclosure" known as Ashland Square.

Approved May 17, 1853.

RESOLUTION No. 348 provides for the completion of the Wells and McComas Monument.* Appropriated $2,700.

Approved October 17, 1872.

ORDINANCE No. 107, of 1874, provided for the appointment of a keeper of Ashland Square.

Approved October 24, 1874.

RESOLUTION No. 12, of 1881, provided for the construction of a gate in the railing around the Wells and McComas Monument. Appropriation, $50.00.

Approved February 1, 1881.

ORDINANCE No. 78, of 1881, provided for the appointment of Commissioners for Ashland Square.

Approved May 17, 1881.

(*See Monument, Page 185.)

BO-LIN PARK.

ORDINANCE No. 66, of 1893, authorizes the Mayor and City Council of Baltimore to accept a deed in fee for a lot of ground called Bo-Lin Park, in the City of Baltimore.
Approved March 28, 1893.

(This square is surrounded by back yards of houses fronting on Linden avenue, Roberts, Bolton and Laurens streets, and is approached only through an alley).

RESOLUTION No. 121, of 1893, authorizes the Mayor to appoint three commissioners for Bo-Lin Park.
Approved April 20, 1893.

BOLTON SQUARE.

(Mt. Royal Station.)

ORDINANCE No. 51, of 1892, provides for the sale by the Mayor and City Council of Baltimore, to the Baltimore Belt Railroad Company, of a portion of the Bolton lot property, and for "the improvement of the residue of said property as a *public park.*"
Approved April 18, 1892.

ORDINANCE No. 19, of 1893, repeals and re-enacts Section 3 of Ordinance No. 51, approved April 18, 1892, in reference to Bolton Square.
Approved February 27, 1893.

ORDINANCE No. 88, of 1894, repeals the last clause of Section 5, of Ordinance No. 51, of the ordinances of 1892, entitled "An ordinance to provide for the sale by the Mayor and City Council of Baltimore to the Baltimore Belt Railroad Company of a portion of the Bolton lot property, and for the improvement of the residue of the said property as a public park."
Approved May 18, 1894.

BREWER SQUARE.

ORDINANCE No. 29, of 1892, authorizes the Mayor to accept a deed for a lot of ground to be called "Brewer Square."
Approved March 21, 1892.

(This square is in the rear of the houses fronting on North avenue, Park avenue, Laurens and Bolton streets, and its only approach is through an alley).

ORDINANCE No. 13, of 1893, authorizes the appointment of three commissioners for Brewer Square.

Approved February 23, 1893.

BROADWAY SQUARES.

RESOLUTION No. 23, of 1858, provides for the planting of shade trees along the line of Broadway. Appropriation, $300.00.

Approved December 9, 1858.

ORDINANCE No. 80, of 1872, directs the Mayor to appoint three suitable persons to act as commissioners for the Broadway Squares.

Approved June 17, 1872.

ORDINANCE No. 32, of 1872, provides that there shall be annually appointed, as other city officers are appointed, a keeper of the public squares on Broadway, between Belair avenue and Baltimore street.

Approved April 3, 1872.

RESOLUTION No. 396, of 1874, directs that the public square on North Broadway, between Chew and Eager streets, be curbed and improved. Appropriation, $3,500.00.

Approved October 19, 1874.

RESOLUTION No. 305, of 1878, instructs the Commissioners of the Broadway Squares to remove the railings from said squares and to sell the same.

Approved September 25, 1878.

RESOLUTION No. 150, of 1880, provides for the improvement of Broadway Squares. Appropriation, $1,500.00.

Approved May 12, 1880.

RESOLUTION No. 160, of 1883, provides for improved "Gas Lamps" on Broadway Square.

Approved September 22, 1883.

RESOLUTION No. 8, of 1889, appropriates a sum of money for the maintenance of Broadway Squares, 1st Division. Appropriation, $152.50.

Approved December 9, 1889.

RESOLUTION No. 30, of 1891, provides for an appropriation of money for Broadway Squares, 1st Division. Appropriation, $175.

Approved February 9, 1891.

CALLOW TRIANGLE.

ORDINANCE No. 56, of 1898, authorizes the Mayor and City Council of Baltimore to accept a deed in fee for a lot of ground for a "public park" at the intersection of Lennox street, Callow and Bolton avenues.

Approved May 12, 1898.

CARROLL PARK.

ORDINANCE No. 20, of 1889, entitled "An ordinance to purchase and improve a tract of land in the southwest part of Baltimore City to be used for the purposes of a public park." Appropriation, $45,000.00.

Approved March 25, 1889.

ORDINANCE No. 151, of 1890, provides for the purchase of the "West Baltimore Schuetzen tract of land," to be known as "Carroll Park." Appropriation, $50,000.00.

Approved June 26, 1890.

ORDINANCE No. 64, 1893, authorizes the Park Commission to purchase or condemn all that portion of ground situated within the limits of the south side of Carroll Park, east side of Monroe street, north side of Columbia avenue and the west side of Gunpowder street, for the purpose of enlarging Carroll Park.

Approved March 28, 1893.

ORDINANCE No. 110, of 1893, repeals Ordinance No. 64, approved March 28, 1893, and re-enacts and re-ordains the same with amendment.

Approved May 1, 1893.

ORDINANCE No. 72, of 1897, provides for acquiring the title to a plot of ground within the limits of the east side of Carroll Park, north of Columbia avenue, west side of Bayard street, and the south side of the property of the Baltimore and Ohio Railroad, for the purpose of enlarging Carroll Park.

Approved September 27, 1897.

CITY COLLEGE LOT.

ORDINANCE No. 96, of 1904, authorizes the Board of Park Commissioners to maintain the parking on the north side of the Baltimore City College building, extending from the west side of Howard street to the western extremity of said building.

Approved June 16, 1904.

CLIFTON PARK.

ORDINANCE No. 137, of 1894, sets aside $1,000,000 of the $4,000,000 Loan authorized by the General Assembly in 1894, Chapter 149, and directs that the same be used for acquiring "Clifton" for a public park, and for the acquisition of other park property.

Approved October 5, 1894.

ORDINANCE No. 3, of 1895, provides for the condemnation of "Clifton" as a park.

Approved February 15, 1895.

ORDINANCE No. 27, of 1895, provides for the granting of the use of Clifton Park to the Baltimore Centennial Association for the purposes of the exposition to be held in 1897.

Approved April 2, 1895.

ORDINANCE No. 74, of 1895, authorizes the issuance of bonds to the Baltimore Centennial Association for the improvement of Clifton Park.

Approved May 18, 1895.

ORDINANCE No. 164, of 1903, provides for acquisition of an addition to Clifton Park at the corner bounding on Erdman avenue and Belair road. Appropriation, $25,000.

Approved May 12, 1903.

ORDINANCE No. 143, of 1904, repeals Ordinance No. 164, of 1903, providing for an addition to Clifton Park, and approved May 12, 1903.

Approved October 31, 1904.

COLLINGTON SQUARE.

ORDINANCE No. 56, of 1883, dedicates a lot of ground, leased by the City under Ordinance No. 49, approved April 5, 1880, as a "public square," and authorizes the Mayor to appoint commissioners therefor, the same to be called "Collington Square."
Approved May 5, 1883.

ORDINANCE No. 148, of 1884, places "Collington Square" under control and government of Public Park Commission.
Approved October 21, 1884.

DRUID HILL PARK.

RESOLUTION No. 227, of 1860, appoints a commission in relation to the proposed public parks.
Approved June 4, 1860.

(From 1812 to 1860 only public "squares" had been provided for).

ORDINANCE No. 60, of 1860, provides for a "public park or parks."
Approved July 21, 1860.

ORDINANCE No. 37, of 1863, appropriates $150,000.00 for improvement of Druid Hill and Patterson Parks, and authorizes the Water Board to use lakes in Druid Hill Park.
Approved May 2, 1863.

RESOLUTION No. 111, of 1868, repeals Resolution No. 87, passed May 19, 1865, naming "Lake Chapman," and provides that the name of the lake be "Druid Lake."
Approved March 30, 1868.

The Park Commission, in their report to Mayor, etc., January 1, 1869, give the following estimate of number of acres and cost of Druid Hill Park:

	A.	R.	P.	
"The purchase from Mr. Rogers of the Druid Hill estate, was.....	453	0	28	at $1,000 per acre.
"Additional purchase of Mr. Rogers....	8	1	17	at $1,000 per acre.
" " " " " "	11	3	36	at $1,000 per acre.
"One-fourth of the Mt. Vernon Cemet'y	16	0	00	at $1,000 per acre.
"Bought of Krafts' heirs	4	2	15	for $6,000.
" " " John Clark and others	11	2	23	at $1,000 per acre.
" " " Hugh Gelston	7	3	00	at $700 per acre.
" " " Miles White	5	1	5	at $800 per acre.
"Making in all	518	3	4	

"In addition to the above, the land adjacent to Druid Lake is also included in the park, making the area of this park nearly 700 acres."

RESOLUTION No. 347, of 1874, requests the Park Commissioners to repair the avenue from Madison avenue to entrance of park.

Approved July 9, 1874.

ORDINANCE No. 117, of 1875, authorizes the Park Commissioners to condemn or purchase a lot of ground lying within the limits of Druid Hill Park.

Approved June 29, 1875.

RESOLUTION No. 283, of 1875, relates to the establishment of a fish hatching house and ponds in Druid Hill Park. Appropriation, $5,000.00.

Approved May 11, 1875.

ORDINANCE No. 56, of 1887, provides for increased facilities of access by the public to Druid Hill Park.

Approved May 4, 1887.

ORDINANCE No. 112, of 1890, authorizes the Park Commission to condemn or purchase the portion of ground in Druid Hill Park belonging to the estate of the late George Presstman.

Approved June 3, 1890.

ORDINANCE No. 42, of 1896, authorizes the Mayor and City Council of Baltimore to sell, convey and exchange with Robert Poole, upon terms satisfactory to the Public Park Commission, and by proper deeds of conveyance between the parties, certain lands owned by the respective parties situate in and contiguous to Druid Hill Park.

Approved May 12, 1896.

RESOLUTION No. 126, of 1899, requires the Park Board to remove the wooden fence along the southern and southwestern boundary of Druid Hill Park.

Approved February 23, 1899.

EASTERN CITY SPRINGS SQUARE.

RESOLUTION No. ——, of 1838, authorized and directed the City Commissioners to plant trees and erect a good and substantial fence about "Eastern Fountain," now Eastern City Springs Square.

Approved April 12, 1838.

RESOLUTION No. 176, of 1860, refers to walks and trees in the "Eastern Spring Lot." (Walks to be graveled; "trees tobacco-juiced and whitewashed.") Appropriation, $200.00.

Approved May 12, 1860.

ORDINANCE No. 76, of 1872, authorized the Mayor to appoint three commissioners for the Eastern City Spring.

Approved June 11, 1872.

RESOLUTION No. 345, of 1873, provides for the placing of "Park Globe Lamps" in the Eastern City Spring.

Approved June 11, 1873.

RESOLUTION No. 398, of 1875, provided for benches in Eastern City Spring. Appropriation, $500.00.

Approved July 14, 1875.

RESOLUTION No. 40, of 1888, provides for the removal and replanting of trees on the borders of Eastern City Fountain Square. Appropriation, $175.00.

Approved March 19, 1888.

EUTAW PLACE SQUARES.

ORDINANCE No. 18, of 1853, accepts the donation of "Eutaw Place" Squares, from Dolphin street to the north line of the donor's property, from Henry Tiffany.

Approved March 19, 1853.

ORDINANCE No. 76, of 1853. extends Eutaw Place Squares to Laurens street.

Approved July 15, 1853.

ORDINANCE No. 35, of 1856, authorizes the erection of an iron railing around Eutaw Square, similar to the railing around Mount Vernon Place.

Approved July 8, 1856.

RESOLUTION No. 52, of 1861, directed the City Commissioners to make certain improvements in Eutaw Square. Appropriation $200.

Approved March 11, 1861.

ORDINANCE No. 90, of 1876, extended "Eutaw Place" from Laurens street to North avenue.

Approved May 23, 1876.

RESOLUTION No. 289, of 1876, provided for the removal and disposal of the railing of the square on Eutaw Place, between "Townsend" and Mosher streets.

Approved June 8, 1876.

RESOLUTION No. 94, of 1878, provided for the appointment of two additional commissioners for "Eutaw Squares."

Approved March 25, 1878.

ORDINANCE No. 9, of 1880, provided for the division of Eutaw Squares, so as to put them under the control of two commissioners, and for the appointment of commissioners for the same.

Approved February 24, 1880.

RESOLUTION No. 150, of 1888, appropriated $400 to complete fountain in Eutaw Place, between Presstman and Bloom streets.

Approved October 2, 1888.

FEDERAL HILL PARK.

ORDINANCE No. 71, of 1852, provides for the laying out and condemning of a "public square" on Federal Hill.

Approved July 22, 1852.

RESOLUTION No. 117, of 1853. provides for paying the City's proportion of benefits arising from laying out a public square on Federal Hill.

Approved May 3, 1853.

ORDINANCE No. 152, of 1875, provides for the condemnation of the vacant ground lying between Johnston, Hughes, Covington, and Warren streets, known as Federal Hill, and the Observatory buildings located thereon, for the purpose of a public square or park.

Approved October 25, 1875.

ORDINANCE No. 88, of 1879, places the vacant ground lying between Johnson, Hughes, Covington and Warren streets, known as Federal Hill, under the control and government of the Public Park Commission.

Approved October 20, 1879.

ORDINANCE No. 83, of 1885, authorizes the Board of Park Commissioners to purchase a lot of ground on the west side of Covington street, between Warren street and Grindall street, for a public park, adjacent to Federal Hill. Appropriation, $8,000.

Approved September 25, 1885.

ORDINANCE No. 47, of 1886, provides that the observatory and pavilion in Federal Hill Park shall be leased, together or separately, by the Park Commission, to such person or persons, for such term of years and for such rent as shall be determined by said Commission; provided, the rent of the observatory and so much of the pavilion as shall be necessary for the observatory, shall not be less than the interest at the rate of six per cent. per annum on the cost of said observatory and so much of the said pavilion as shall be required for the purposes of the observatory.

Approved April 17, 1886.

ORDINANCE No. 80, of 1887, provides that the control of the observatory and pavilion on Federal Hill shall be the same as that exercised by the Public Park Commission over other parks in the city, and the property therein, with authority to make such rules and regulations for the use thereof as may be proper and necessary

Approved May 17, 1887.

RESOLUTION No. 155, of 1889, appropriates $2,000 for the purpose of driving piles in the slopes of Federal Hill Park.

Approved November 7, 1889.

ORDINANCE No. 30, of 1892, authorizes the Public Park Commission to purchase certain property as an addition to Federal Hill Park.

Approved March 21, 1892.

FIFTH REGIMENT ARMORY LOT.

ORDINANCE No. 85, of 1904, authorizes the Board of Park Commissioners to maintain the parking along Preston street on the south side of the Fifth Regiment Armory.

Approved May 31, 1904.

FRANKLIN SQUARE.

ORDINANCE No. 47, of 1839, authorized the acceptance from James Canby and Samuel Canby of a square of ground in the western section of the city to be called "Franklin Square." Appropriation, $10,000.

Approved April 23, 1839.

RESOLUTION No. —, of 1839, appropriated $2,550 to grade and fence Franklin Square.

Approved October 21, 1839.

RESOLUTION No. —, of 1840, directed "the Commissioners of Health" to place upon Franklin Square so much of the "street manure" as the City Commissioners might deem necessary.

Approved March 19, 1840.

ORDINANCE No. 32, of 1844, amended Ordinance 47, of 1839, in reference to Franklin Square.

Approved April 13, 1844.

ORDINANCE No. 30, of 1845, appointed a keeper for Franklin Square.

Approved April 19, 1845.

ORDINANCE No. 131, of 1850, authorized the placing of "cast iron seats" in Franklin square. Appropriation, $100.

Approved June 17, 1850.

ORDINANCE No. 16, of 1854, provided for the improvement of Franklin and Union Squares. Appropriation, $958.

Approved May 4, 1854.

RESOLUTION No. 63, of 1857, provided for the trimming of trees in Union and Franklin Squares. Appropriation, $250.

Approved April 9, 1857.

RESOLUTION No. 360, of 1874, authorizes the Commissioners of Franklin Square to remove and dispose of the iron railings.

Approved October 3, 1874.

RESOLUTION No. 22, of 1875, provides for the sale of the iron railing of Franklin Square to the "Park Commissioners."

Approved January 2, 1875.

FULTON AVENUE SQUARES AND BAKER CIRCLE.

RESOLUTION No. 241, of 1869, approved September 14, 1869, and Ordinance No. 108, approved June 7, 1875, authorized the acceptance from the executors of the late William Baker, of a deed in fee of a circle of ground at the intersection of Fulton and Baker streets, two hundred and forty feet in diameter, and in consideration thereof the Mayor and Council agreed to lay out within said circle another circle one hundred and twenty feet in diameter, with a fountain in the centre.

RESOLUTION No. 253, of 1873, provided for the improvement of the public circle at the intersection of Fulton avenue and Baker street.

Approved May 8, 1873.

ORDINANCE No. 126, of 1874, authorized the appointment, in the usual manner, of a citizen of proper character and discretion to be a commissioner, with authority to protect and care for the public circle at the intersection of Baker Street and Fulton avenue.

Approved November 5, 1874.

ORDINANCE No. 47, of 1887, established public parks or squares in Fulton avenue, between Edmondson avenue and Presstman street. Appropriation, $7,000.

Approved April 20, 1887.

ORDINANCE No. 16, of 1889, repeals Ordinance No. 126, of 1874, and provides for the appointment of three commissioners for Fulton Avenue Squares, on Fulton avenue between Edmondson avenue and Presstman street, and for Baker Circle, at the intersection of Fulton avenue and Baker street.

Approved March 20, 1889.

RESOLUTION No. 96, of 1891, appropriates $190.45 to Fulton Avenue Squares and Baker Circle.
Approved April 11, 1891.

RESOLUTION No. 203, of 1892, requests the Mayor to confer with the representatives of the donor of Baker Circle, relative to changing the form of said circle.
Approved October 17, 1892.

ORDINANCE No. 8, of 1899, authorizes the Mayor to recede to the reversionary estate so much of the bed of Baker Circle as lies without the lines of Fulton avenue and Baker street.
Approved November 6, 1899.

RESOLUTION No. 6, of 1899, authorizes the Park Board to assume control of plots of ground on Fulton avenue between Pennsylvania avenue and Presstman street as "public parks."
Approved December 4, 1899.

GREEN SPRING AVENUE ROAD.

THE ACT of 1864, Chapter 141, is entitled "An Act to amend the Act to incorporate the Green Spring Avenue Company," passed at January session, 1858, c. 216, and the Act amendatory thereof, passed at January session, 1860, c. 164, and to carry out the provisions of an agreement made between the said company and the Mayor and City Council of Baltimore, recites that, an agreement has been made between the said Company and the Mayor and City Council of Baltimore, whereby a road has been provided through Druid Hill Park, from the southern entrance thereof to an entrance already agreed upon on Woodberry lane, which road is to be at all times hereafter kept open and in repair by the Park Commissioners, for use at all hours of the day and night, for such travel as is permitted by the general regulations of the park within its limits; then enacts, that the Green Spring Avenue Company are hereby released from the obligation of constructing their said avenue south of the northern boundary of said park; and that the said Druid Hill Park is hereby declared to be forever exempt from the passage through it, or the construction within it of any public highway, turnpike or railroad. And that this Act shall be of non-effect until accepted by the Green Spring Avenue Company.

This Act was duly accepted by the Company.

ORDINANCE No. 148, of 1896, authorizes the acceptance by the Mayor and City Council of a deed or deeds, from the owners thereof, of the bed of Green Spring Avenue road from the northerly entrance of Druid Hill Park to the Western Run Bridge, in Baltimore County.

Approved October 16, 1896.

SECTION 6, of the City Charter (1898), places the maintenance of the Green Spring Avenue Road upon the Board of Park Commissioners.

GWYNN'S FALLS PARK.

ORDINANCE No. 106, of 1901, provides for the acquisition of a lot of ground in the western section of Baltimore City, west of Gwynn's Falls, south of Edmondson avenue, north of Frederick road and east of Heald's lane, for the purpose of establishing a public park. Appropriation, $25,000.

Approved February 25, 1901.

HARLEM PARK.

ORDINANCE No. 9, of 1868, accepts a lot of ground from the estate of the late Dr. Thos. Edmondson, to be called "Harlem Square."

Approved February 29, 1868.

ORDINANCE No. 65, of 1872, provided for the appointment annually, as other city officers are appointed, of a keeper for Harlem Square, who should possess some knowledge of gardening.

Approved May 30, 1872.

RESOLUTION No. 313, of 1874, provided for the installation of gas lamps around and within Harlem Square.

Approved June 15, 1874.

RESOLUTION No. 244, of 1875, provided for the removal of the wooden fence around Harlem Square, and also the brick house in said Square.

Approved May 1, 1875.

ORDINANCE No. 21, of 1876, provides for changing the name of "Harlem Square" to "Harlem Park."

Approved March 4, 1876.

RESOLUTION No. 244, of 1881, provides that $100, derived by the Commissioners of Harlem Park for the rent of office in said park, be paid to the said commissioners to be expended on improvements in said park.

Approved May 31, 1881.

RESOLUTION No. 73, of 1886, provides for improvement of Harlem Park. Appropriation, $9,000.

Approved April 10, 1886.

RESOLUTION No. 29, of 1888, appropriates $3,125 to repair damage in Harlem Park from floods of July, 1887.

Approved March 12, 1888.

"HOPKINS PARK."

ORDINANCE No. 32, of 1897, establishes an unpaid commission to inquire into and report on the expediency of the purchase of a park, to be known as "Hopkins Park," at Eutaw street, St. Mary street and Druid Hill avenue, and for parking the bed of McCulloh street from Biddle street to St. Mary's street.

Law by Limitation, June 22, 1897.

ORDINANCE No. 83, of 1902, establishes an unpaid commission to inquire into and report on the expedience of the purchase of a park, to be known as "Hopkins Park."

Approved July 31, 1902.

JACKSON SQUARE.

(This square may, possibly, be referred to in Ordinance No. 37, April 6, 1829, authorizing the appointment of a keeper of the public square on "Hampstead Hill.")

ORDINANCE No. 16, of 1856, provided for the improvement of Jackson Square. Appropriation, $550.

Approved April 19, 1856.

RESOLUTION No. 175, of 1860, provided for the repair of fence around Jackson Square . Appropriation, $25.

Approved May 12, 1860.

RESOLUTION No. 198, of 1874, relates to the improvement of Jackson Square. Appropriation, $4,000.

Approved April 14, 1874.

RESOLUTION No. 267, of 1874, requested the then Commissioners of Broadway Squares to confer with the City Commissioner in regard to the improvement of Jackson Square.

Approved May 27, 1874.

ORDINANCE No. 96, of 1875, provides for the appointment of a keeper for Jackson Square.

Approved May 20, 1875.

ORDINANCE No. 109, of 1875, authorized the appointment of three commissioners for Jackson Square.

Approved June 9, 1875.

JOHNSTON SQUARE.

ORDINANCE No. 38, of 1878, provides for the purchase of the lot of ground bounded by McKim, Valley, Biddle and Chase streets, to be used as a public square. Appropriation, $20,000.

Approved May 3, 1878.

ORDINANCE No. 77, of 1878, names the square recently purchased by the city, bounded by Chase, Biddle, Valley and McKim streets, "Johnston Square."

Approved June 28, 1878.

ORDINANCE No. 6, of 1879, authorized the appointment of three commissioners for Johnston Square.

Approved February 26, 1879.

ORDINANCE No. 23, of 1883, provides for the placing of Johnston Square under the control and government of the Public Park Commission.

Approved April 13, 1883.

RESOLUTION No. 195, of 1883, appropriated $329.65 for the improvement of "Johnston Square."

Approved October 20, 1883.

RESOLUTION No. 98, of 1892, provided for the paving with asphalt blocks of certain walks in Johnston Square. Appropriation, $1,600.

Approved April 4, 1892.

LAFAYETTE SQUARE.

ORDINANCE No. 34, of 1857, authorized the Commissioners of Finance to purchase from Aaron Hoffman and others, the square of ground bounded by Townsend, Lanvale, Republican (now Carrollton avenue) and Oregon streets, for a public square, to be called "Lafayette Square."

Approved April 28, 1857.

ORDINANCE No. 69, of 1859, provided for the railing in of Lafayette Square.

Law by limitation.

RESOLUTION No. 256, of 1873, provided for the removal of the iron railing from around Lafayette Square.

Approved May 8, 1873.

RESOLUTION No. 174, of 1881, authorized the Commissioners of Lafayette Square to pay their deficiency bills of 1880, out of the appropriation made for the maintenance of the square in 1881.

Approved May 14, 1881.

LATROBE PARK.

ORDINANCE No. 80, of 1900, provides for the acquisition of the lot of ground, now "Latrobe Park." Appropriation, $25,000.

Approved December 7, 1900.

LIBERTY TRIANGLE.

ORDINANCE No. 33, of 1892, prohibits the deposit of ice, snow, dirt, sand, stones, lumber, or other material, in the triangular space formed by Park avenue, Fayette and Liberty streets (now "Liberty Triangle.")

Approved March 21, 1892.

ORDINANCE No. 45, of 1892, provided for the improvement of the triangular space of ground bounded by Park avenue, Fayette and Liberty streets, for the purpose of a park. Appropriation, $600.

Approved April 7, 1892.

RESOLUTION No. 189, of 1894, directed the Park Commission to "sod with grass, plant flowers in, and place railing around the triangle at Fayette and Liberty streets and Park avenue." Appropriation $200.

Approved May 2, 1894.

"LINDEN TRIANGLE."

ORDINANCE No. 115, of 1895, authorizes the Mayor and City Council of Baltimore to accept a deed in fee of a lot of ground called "Linden Square."

Approved July 16, 1895.

MADISON SQUARE,

ORDINANCE No. 27, of 1853, authorized the purchase from Archibald Sterling of "Madison Square," bounded by Chase, Caroline, Eager and Eden streets. Appropriation, $30.000.

Passed over Mayor's veto April 6, 1853.

ORDINANCE No. 51, of 1855, provided for the improvement of Madison Square. Appropriation, $300.

Approved April 13, 1855.

ORDINANCE No. 13, of 1860, provided for the erection of a house for the keeper of Madison Square. Appropriation, $100.

Approved March 22, 1860.

RESOLUTION No. 67, of 1864, provided for the erection of a fountain in Madison Square. Appropriation, $1,000.

Approved April 7, 1864.

RESOLUTION No. 27, of 1879, provided for the removal of the iron railings and kerbing from around Madison Square.

Approved March 1, 1879.

RESOLUTION No. 118, of 1899, provided for the erection of a drinking fountain in Madison Square. Appropriation, $75.

Approved February 7, 1899.

"MAPLE PARK."

ORDINANCE No. 95, authorizes the Mayor to accept a deed for a lot of ground, to be called "Maple Park."

Approved April 24, 1893.

(This "park" is in the rear of the houses fronting on North avenue, Park avenue, John and Wilson streets, and its only approach is through alleys.)

MT. ROYAL AVENUE SQUARES.

ORDINANCE No. 56, of 1877, provides that the centre part of Oliver street (now Mt. Royal avenue), to the width of thirty feet, between Dolphin street and North avenue, be maintained by the city for an alameda or public walk, leaving a public way or street bed on each side of said alameda thirty-five feet in width, and a foot way of twelve and a-half feet on each side of said public way; provided, that said improvement shall be made when eight houses of not less than eighteen feet front shall have been erected on each square.

Approved June 29, 1877.

MT. ROYAL AVENUE TERRACES.

("Sunken Gardens.")

RESOLUTION No. 46, of 1890, authorizes the Park Commission to assume the control of the plots of ground belonging to the city, and known as the Mt. Royal Avenue Terraces, binding upon the north side of Mt. Royal avenue, between Lovegrove alley on the west and Guilford avenue on the east, and to care for the same in perpetuity as "public parks."

Approved March 15, 1890.

MT. VERNON AND WASHINGTON PLACE SQUARES.

ORDINANCE No. 27, of 1831, confirmed an Act of Assembly passed at the December session of 1830 in reference to the squares about the Washington Monument.

Approved April 21, 1831.

RESOLUTION No. 123, of 1845, authorized the fencing in of the western square opposite the Washington Monument.

Approved May 7, 1845.

ORDINANCE No. 168, of 1852, directed the care of trees in Mount Vernon and Washington Place Squares.

Approved July 21, 1852.

ORDINANCE No. 59, of 1858, recites that it shall not be lawful for any person to erect or set up any portico, steps, or any other ornamental structure whatever, on Mt. Vernon Place, a greater distance into the place than nine feet, measuring from the building line thereof.

Approved June 5, 1858 (see Garrett vs. Jane, 65 Md. 260).

RESOLUTION No. 71, of 1874, appropriated $225 for ornamental boxes for English sparrows in the Mt. Vernon Squares.

Approved March 3, 1874.

ORDINANCE No. 33, of 1875, provided for the appointment of commissioners to report to the Mayor and City Council a plan for the improvement and adornment of the public grounds on Mt. Vernon and Washington Places.

Approved March 6, 1875.

RESOLUTION No. 264, of 1876, provided for certain repairs and improvements in and around Washington Monument, and appropriating the sum of $2,600 therefor.

Approved June 3, 1876.

ORDINANCE No. 135, of 1876, provided for the proper improvement and permanent preservation and care of the public squares around the Washington Monument. Appropriation $12,000.

Approved October 10, 1876.

RESOLUTION No. 57, of 1877, authorizes the sale by the Square Commissioners of the railing at Mt. Vernon Place, which cost between $30,000 and $40,000, to the Mayor and City Council for $6,000 for Druid Hill Park.

Approved March 13, 1877.

ORDINANCE No. 50, of 1882, prohibits persons from walking upon the grass in the squares around the Washington Monument, known as Mt. Vernon Place and Washington Place.

Approved April 28, 1882.

PARK PLACE SQUARES.

ORDINANCE No. 66, of 1860, directed the Commissioners for Opening Streets to close Grundy street (now Park avenue), between McMechen and Laurens streets, and Foster alley, from McMechen to Wilson streets, and Jenkins alley, from McMechen to Laurens street; *provided,* that before the said commissioners proceeded to exercise the duties hereby required of them, the applicants to close said street, or some of them, should execute and deliver clear of expense, or cause to be executed and delivered clear of expense, to the Mayor and City Council a deed in fee, for the following pieces or parcels of ground, viz: all that strip or parcel of ground as laid down or an accompanying plat (made a part of Ordinance), between McMechen and Laurens streets, one hundred and fifty feet wide, to be called "Park Place," and to be kept and preserved as a public square forever.

Approved July 23, 1860.

ORDINANCE No. 100, of 1875, authorized the appointment of three commissioners for Park Place.

Approved May 31, 1875.

RESOLUTION No. 376, of 1876, appropriated the sum of $500 for the improvement of Park Place.

Approved November 1, 1876.

RESOLUTION No. 112, of 1878, appropriated $496.93 for the Commissioners of Park Place.

Approved April 13, 1878.

ORDINANCE No. 110, of 1890, authorized the Mayor to accept a deed of a certain portion of Park avenue from the owners thereof. Appropriation, $12,000 for improvement of same.

Approved May 31, 1890.

ORDINANCE No. 56, of 1897, ratifies, on the part of the city, an agreement of counsel for the settlement of the equity suit of Bond et. al. vs. The Mayor and City Council to provide for the improvement and maintenance of ornamental squares in Park avenue, between the middle of Reservoir street and Mt. Royal avenue, and places the same in charge of the Park Board. Appropriation, $10,000.

Approved July 2, 1897.

PATTERSON PARK.

The 37 acres, originally comprising Patterson Park, were conveyed by deed of gift to the city by William Patterson about 1827.

RESOLUTION No. 56, of 1851, directed the erection of a wooden shed and the placing of ten benches in Patterson Park. Appropriation, $80.

Approved April 16, 1851.

RESOLUTION No. 120, of 1852, authorized the improvement of Patterson Park by the painting of house, the planting of trees and the providing of park benches.

Approved June 4, 1852.

RESOLUTION No. 128, of 1853, directed the addition of two rooms to the dwelling at Paterson Park and the planting of not less than 150 shade trees. Appropriation, $450.

Approved May 9, 1853.

ORDINANCE No. 116, of 1871, authorized the extension of Patterson Park by an addition, commencing at the southwest corner of the said park at Gough street and running thence southerly binding on the east side of Patterson Park avenue to Eastern avenue, thence easterly binding on the north side of said Eastern avenue to Potomac street, thence on the west side of Potomac street northerly to Baltimore street, thence westerly and binding on the south side of Baltimore street to the northeast corner of the said park at Luzerne street.

Approved June 23, 1871.

By the Act of 1872, Chapter 7, the Mayor and City Council of Baltimore were authorized and empowered to issue the bonds of the said city to the amount of two hundred thousand dollars, for the purpose of providing for the extension of Patterson Park, in said city, and the above Ordinance of the Mayor and City Council, June 23, 1871, was ratified and confirmed.

RESOLUTION No. 54, of 1855, provides for repairing the house and fence at Patterson Park. Appropriation, $100.

Approved April 13, 1855.

ORDINANCE No. 120, of 1882, provides for an issue of Bonds to the amount of two hundred thousand dollars, for the extension of Patterson Park.

Approved October 19, 1882.

ORDINANCE No. 85, of 1889, directs the Park Commission to proceed with the improvement of the eastern annex of Patterson Park. Appropriation, $200,000.

Approved June 3, 1889.

ORDINANCE No. 199, of 1893, provides for the continuation of the improvement of the eastern addition to Patterson Park. Appropriation, $10,000.

Approved May 29, 1893.

ORDINANCE No. 66, of 1895, provides for the continuation of the improvement of the eastern addition to Patterson Park.

Approved May 14, 1895.

PERKINS SPRING SQUARE.

ORDINANCE No. 300, of 1872, authorized the City Comptroller to lease for public use that portion of the Perkins Spring property located within the following bounds, not leased: On the west by Ogston street, on the south by George street, and on the northeast by Myrtle avenue, at a rate not to exceed four dollars and a-half per front foot for the building lots contained within said bounds, and with the right reserved to purchase at six per cent., capitalized at the convenience of the city.

Approved October 1, 1872.

ORDINANCE No. 14, of 1873, authorized the Mayor to appoint three commissioners for Perkins' Spring Square, located at the junction of George street and Chatsworth street (now Myrtle avenue), to be selected from among the residents of the vicinity of said square, who shall serve without compensation.

Approved April 3, 1873.

RESOLUTION No. 392, of 1873, provides for improvements at Perkins Spring Square. Appropriation, $1,500.

Approved July 8, 1873.

ORDINANCE No. 20, of 1875, provided for the appointment of a keeper for Perkins Spring Square.

Approved February 15, 1875.

RESOLUTION No. 71, of 1887, provides for the erection of a house in Perkins Spring Square for the propagation of plants and flowers. Appropriation, $600.

Approved April 9, 1887.

RESOLUTION No. 166, of 1888, appropriates $350 to complete greenhouse in Perkins Spring Square.

Approved October 16, 1888.

PROSPECT SQUARE.

ORDINANCE No. 27, of 1859, authorized the City Commissioner to lay out a square of ground, octagonal in form, twenty-two feet in diameter, at the intersection of Harford avenue, Britton and Ensor streets, to be known as "Prospect Square," and to have the same enclosed with a suitable iron railing.

Approved February 28, 1859.

ORDINANCE No. 85, of 1859, supplements an ordinance entitled "An Ordinance to lay out and rail in a certain piece of ground as a public square, to be known as 'Prospect Square,'" approved February 28, 1859.

Approved May 20, 1859.

RESOLUTION No. 168, of 1880, provides for an appropriation for "Prospect Square."

Approved May 18, 1880.

RESOLUTION No. 161, of 1883, provided for the removal of fountain from "Prospect Square" to "Madison Square."

Approved September 22, 1883.

RESOLUTION No. 104, of 1894, provided for the removal of granite work and iron railing from Prospect Square. Appropriation $150.

Approved March 20, 1894.

RIGGS TRIANGLE.

ORDINANCE No. 76, of 1902, provides for the acquisition of a triangular lot of ground at the intersection of Riggs, Fremont and Arlington avenues for the purpose of establishing there a public reservation or park. Appropriation, $1,000.

Approved June 12, 1902.

RIVERSIDE PARK.

ORDINANCE No. 82, of 1854, recites that application has been made for the condemnation of a piece or parcel of ground for a public square, bounded on the north by Randall street, on the east by Covington street, on the south by Heath street, and on the west by Johnson street, and authorizes and requires the Commissioners for Opening Streets to condemn the afore-described piece or parcel of ground, to be used forever thereafter as a public square, to be called the "Battery."

Approved September 19, 1854.

ORDINANCE No. 98, of 1872, authorizes the Mayor to appoint Commissioners for "Battery Square."

Approved September 23, 1872.

ORDINANCE No. 65, of 1873, authorizes the Mayor to lease 14 acres of ground as an addition to "Battery Square." Section 2 enacts and ordains that the name of the property shall be "Riverside Park."

Approved June 11, 1873.

ORDINANCE No. 103, of 1875, directs the Commissioners for Opening Streets to condemn and take for a public square, a parcel of land on the west side of Covington street, and lying within the lines of Riverside Park.

Approved June 1, 1875.

RESOLUTION No. 329, of 1875, directs the Commissioners of Riverside Park to proceed with the work of fencing said park, &c. Appropriation, $10,000.

Law by Limitation, May 15, 1875.

ORDINANCE No. 7, of 1876, provided for the placing of Riverside Park under the control and government of the Public Park Commission.

Approved February 2, 1876.

RESOLUTION No. 59, of 1877, appropriated $20,000, or so much thereof as might be necessary, for the improvement of Riverside Park.

Approved March 22, 1877.

ORDINANCE No 16, of 1878, provided for the lighting of Riverside Park. Appropriation, $2,200.

Approved April 13, 1878.

RESOLUTION No. 151, of 1880, provided for the improvement of Riverside Park. Appropriation, $2,500.

Approved May 12, 1880.

RESOLUTION No. 211, of 1880, authorizes payment of indebtedness incurred in improvement of Riverside Park.

Approved June 7, 1880.

ORDINANCE No. 69, of 1883, authorizes the Board of Park Commissioners to purchase a piece of ground lying within the enclosure of Riverside Park, at the northeast corner thereof. Appropriation, $3,500.

Approved May 24, 1883.

ORDINANCE No. 97, of 1885, provides for the purchase of a strip of land lying within the enclosure of Riverside Park. Appropriation, $2,500.

Approved October 26, 1885.

ORDINANCE No. 16, of 1891, was to supply the deficiency existing in the accounts of Riverside Park. Appropriation, $1,023.26.

Approved March 24, 1891.

RESOLUTION No. 76, of 1891, provides for an iron railing or iron screen to be placed around the fountain at Riverside Park. Appropriates $300 out of levy for 1891.

Approved March 26, 1891.

RESOLUTION No. 154, of 1899, requests the Park Board to place ten electric lights in Riverside Park.

Approved May 1, 1899.

SWANN PARK.

ORDINANCE No. 114, of 1901, provides for the acquisition of lot of ground, now "Swann Park." Appropriation, $25,000.

Approved March 25, 1901.

TANEY PLACE SQUARES.

ORDINANCE No. 12, of 1881, provides for the naming of that part of North Avenue, lying between Charles and Oak streets, "Taney Place."

Approved February 16, 1881.

ORDINANCE No. 14, of 1881, provides for the appointment of commissioners and of a keeper of "Taney Place," "in Boundary avenue between Charles and Oak streets."

Approved February 23, 1881.

RESOLUTION No. 35, of 1889, directs the City Commissioner to improve "the park at the corner of Charles street and North avenue." Appropriation, $300.

Approved March 16, 1889.

UNION SQUARE.

ORDINANCE No. 22, of 1847, accepted the donation of Union Square approving the terms that the same be improved within five years from the date of the Ordinance.

Approved April 9, 1847.

ORDINANCE No. 38, of 1849, authorized the disposal of the surplus water arising from the public fountain in Union Square, to the B. & O. Railroad for $4,000. The railroad company being also authorized to lay pipes for conveying the water to their depot on Camden street.

Approved April 18, 1849.

ORDINANCE No. 84, of 1850, directed the building of an ornamental structure over the spring in Union Square.

Approved May 3, 1850.

ORDINANCE No. 85, of 1852, directed that Union Square be laid off and improved.

Approved April 30, 1852.

ORDINANCE No. 35, of 1852, appointed a keeper of Union Square.

Approved May 28, 1852.

ORDINANCE No. 45, of 1853, was a Supplement to a Supplementary Ordinance, entitled "An Ordinance to authorize the Mayor to accept a deed of the property, therein named," called "Union Square."

Approved May 31, 1853.

ORDINANCE No. 8, of 1855, provided for enclosing "Union Square Lot." Appropriation, $11,000.

Approved January 15, 1855.

RESOLUTION No. 94, of 1856, relates to transplanting certain trees from Mount street into Union Square. Appropriation, $50.

Approved April 19, 1856.

RESOLUTION No. 123, of 1860, provides for gravelling the walks in Union Square. Appropriation, $150.

Approved April 17, 1860.

RESOLUTION No. 55, of 1898, authorizes the Board of Park Commissioners to give their order to the City Comptroller in the sum of $1,500 for the benefit of Union Square.

Approved May 19, 1898.

WILKENS AVENUE SQUARES.

ORDINANCE No. 82, of 1887, amends Ordinance No. 48, approved April 20, 1887, entitled "An Ordinance to *park*, grade, and pave Wilkens avenue, between Gilmor and Bentalou streets." Appropriation, $7,000.

Approved May 18, 1887.

ORDINANCE No. 42, of 1890, provides for the appointment of Commissioners of Wilkens Avenue Squares.

Approved April 10, 1890.

ORDINANCE No. 131, of 1898, appropriated $100 for the use of the Commissioners of Wilkens Avenue Squares.

Approved December 8, 1898.

WYMAN PARK.

ORDINANCE No. 90, of 1874, provided for the acceptance by the Mayor and City Council of Baltimore, of a deed in fee of a tract of land in Baltimore County, to be forever used as a public park, and to be called "Homewood Park."

Approved October 17, 1874.

ORDINANCE No. 129, of 1876, repeals an Ordinance entitled "An Ordinance to provide for the acceptance by the Mayor and City Council of Baltimore, of a deed in fee, of a tract of land in Baltimore county, to be forever used as a public park, and to be called 'Homewood Park.'"

Approved June 13, 1876.

ORDINANCE No. 19, of 1878, provided for the acceptance by the Mayor and City Council of Baltimore of a deed in fee of a tract of land in Baltimore county, to be forever used as a public park, and to be called "Homewood Park," for the improvement of the same, and for other purposes in connection therewith. Appropriation, $10,000.

Approved April 8, 1878.

ORDINANCE No. 77, of 1902, accepts certain deeds, and the property conveyed thereby, to the Mayor and City Council, by William Keyser, Samuel Keeper, David H. Carroll and Alfred J. Ulman, for park purposes, and to form a park to be called "Wyman Park."

Approved June 13, 1902.

ORDINANCE No. 163, of 1903, provides for the acquisition of a lot or lots of ground lying along the valley of Stony Run, between Merryman's Lane and West Twenty-ninth street and beyond Twenty-ninth street and along Cedar avenue to constitute with

the lands to be donated by the Johns Hopkins University, an addition to Wyman Park and for a parked way connecting Wyman Park with Druid Hill Park. Appropriation, $50,000.

Approved May 11, 1903.

ORDINANCE No. 150, of 1904, amends and re-enacts Ordinance No. 163, approved May 11, 1903, and provides for the acquisition of a lot or lots of ground not less in all than 150 acres, situated along and in the valley of Stony Run and on the hills adjacent thereto. Appropriation, $100,000, or so much thereof as may be necessary.

Approved November 10, 1904.

FORT M'HENRY.

RESOLUTION No. 11, of 1902, requests the Maryland Representatives in Congress to have a bill passed authorizing and directing the War Department to turn Fort McHenry over to the City of Baltimore for public park purposes.

Approved February 7, 1902.

MONUMENTS.

(*The monuments* were placed in charge of the Board of Park Commissioners by the City Charter of 1898.)

The cornerstone of the Washington Monument was laid July 4, 1815, and the statue of Washington placed on the summit 28th November, 1829. Washington Monument was erected by the State, under the Acts of 1809, c. 113; 1815, c. 102; 1816, c. 77; 1818, c. 212; 1826, c. 165, and 1829, c. 165—the keeper was formerly appointed by commissioners under the Act of 1809.

The foundation stone of the Battle Monument was laid September 12, 1815, under Act of 1815, c. 102, in memory of those who fell in defense of the city the year before.

RESOLUTION No. 263, of 1876, provided for having the Battle Monument cleaned and renovated and appropriating the sum of $300 therefor.

Approved June 3, 1876.

ORDINANCE No. 1, of 1877, supplemented Section 2, of Ordinance No. 30, approved June 10, 1858, entitled "An Ordinance for the preservation of the Battle Monument and the ground adjacent thereto.

Approved November 28, 1877.

The cornerstone of the monument in Ashland Square to Daniel Wells, aged 19 years, and Henry G. McComas, aged 18 years, killed at the Battle of North Point, 12th September, 1814, was laid in 1850; there is also a monument on the field at North Point, erected in 1839, to commemorate the battle of September 12, 1814.

There is a monument on Broadway, erected in 1865, to the memory of Thomas Wildey, who founded in the city of Baltimore, on April 26, 1816, the first society of the Independent Order of Odd Fellows on this continent.

RESOLUTION No. 148, of 1884, grants permission to erect a monument to the memory of Francis Scott Key in Patterson Park.

Approved May 14, 1884.

RESOLUTION No. 183, of 1884, grants permission to erect Independent Order of Odd Fellows Monument in Harlem Square.

Approved June 2, 1884.

RESOLUTION No. 137, of 1886, approves the removal of the monument erected to the memory of Lieutenant Colonel George Armistead in Eutaw Place, to Federal Hill Park. Appropriation, $500.

Approved May 20, 1886.

RESOLUTION No. 130, of 1899, authorized the Mayor to grant a permit to the President and Board of Directors of the Daughters of the Confederacy to erect a monument in Druid Hill Park.

Approved March 7, 1899.

(Erected on Mt. Royal avenue.) (Dedicated February, 1903.)

ORDINANCE No. 133, of 1901, authorized the Maryland Society Sons of the American Revolution to erect a monument on the plaza known as Mt. Royal Plaza, formed by the intersection of Mt. Royal avenue, Oliver and Cathedral streets, to be dedicated to the patriots of the American Revolutionary War of 1776.

Approved May 7, 1901.

(Monument was dedicated October 19, 1901.)

WATSON MONUMENT was erected at the intersection of Mt. Royal avenue and Lanvale street in 1903.

ANNUAL REPORT

—OF THE—

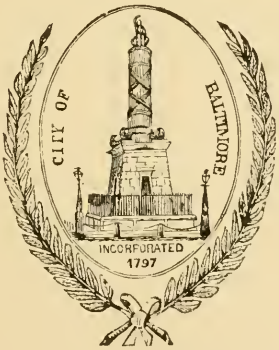
Superintendent of Public Buildings

—TO THE—

Mayor and City Council of Baltimore

—FOR THE—

Fiscal Year Ending December 31, 1904.



BALTIMORE, MD.
WM. J. C. DULANY COMPANY,
CITY PRINTERS.

1905.

ANNUAL REPORT.

OFFICE OF
SUPERINTENDENT OF PUBLIC BUILDINGS,
CITY HALL.

BALTIMORE, January 1, 1905.

To the Honorable the Mayor
and City Council of Baltimore:

GENTLEMEN:—

Pursuant to law, I herewith submit my annual report of the Department of Superintendent of Public Buildings, for the year ending December 31, 1904.

During the four months that I have had supervision of the Public Buildings, much has been done to add to the comfort and convenience of many rooms; some of the offices had been sadly neglected in all three of the public buildings.

CITY HALL.

Those that have received special attention are the Collector of Water Rents and Licenses, Cashier's Office, Water Meter Office, Ledger Clerks' Office, Superintendent of Lighting Chief Clerk's room, and the Fire Alarm rooms on the fourth floor of the City Hall building.

The First and Second Branch City Council Chambers have been renovated, the furniture reupholstered and new draperies hung over the doors and windows. This was contracted for by my predecessor in office, but not completed by him. The doors on the north side of the Second Branch Council Chamber seem to have been overlooked, as no portieres or draperies were provided for them. It was also an oversight in placing the State Coat of Arms on the draperies instead of the City of

Baltimore emblem. This alteration should be made to make the Council Chambers look complete and perfect.

All the rooms badly need painting and frescoing, and I would recommend this be done at an early date. I would also recommend the cleaning by "sand blast" the exterior of the City Hall. I would also recommend a general overhauling of the several toilet rooms, as they are in some cases unfit for use, and far from sanitary.

The electric wiring in this building is old, and entirely inadequate for the work it is expected to do. I would recommend that the attention of the proper authorities be called to this matter at once, as it is absolutely necessary to increase the voltage to supply the demand.

I would also suggest the removal of the repair shop of the Street Cleaning Department from the cellar at once, as this is a source of dirt and a great detriment to the building.

I would further suggest the removal of the City Charity Office to the City Hall Annex, so that the same would be near the Board of Health. Extra space, no doubt, could be rented for this department and thus relieve the overcrowded condition of the City Hall.

I would recommend the basement of portico on Holliday street be made into offices. The cost would be very little to make this change.

New cell batteries are needed for the electrical clock system in the City Hall. The batteries now in use have outlived their usefulness.

CITY HALL ANNEX.

This building is rented by my department at $2,100 per year, and is in bad order. No toilet inside the building, and few, if any, modern conveniences. Something should be done with this important department building to make the place more habitable and comfortable. With the small fund I found to the credit of this building, I was able to cover five rooms

and hallways with new linoleum and rugs. A general cleaning has improved the rooms very much. Another building should be procured if this cannot be modernized at small cost. The condition of this building should be in every sense of the term "Health Department," inside and outside, and not paradoxically "The Department of Health."

COURTHOUSE.

Owing to the fire of February 7th last, the Courthouse was greatly damaged, and as yet nothing has been done to repair such damage.

The only improvements of note made in this building during the year are as follows:

Circuit Court room was covered with linoleum, new draperies hung, also new furniture added. The same does not only present a neat, but comfortable appearance as well.

The hard-wood floor in the Orphans' Court room has been restored to its original beauty. The Courthouse marble has been properly polished, also the woodwork throughout the building has been repolished and now looks equal to new. The engine and boiler-rooms have been overhauled, painted and cleansed; are now equal to any in the city in appearance.

I would recommend the removal of the "Hawley Down Draft System" from the four boilers in this building, as it seems impossible to make steam with this system, and the poor coal we have to use. This coal has been ruinous to the interior, owing to the density of the smoke.

I would suggest that the boilers and engines be removed from this building, as soon as possible, in order to save the building from further unnecessary damage, as the dirt and dust will in a short time completely blacken the brick walls, as it is impossible to keep the coal dust from the interior.

The electric lighting plant is too small for the increased number of lights that have been put on; more is asked for, but cannot be granted, as we have not plant and power enough to give light and heat now required.

The Municipal Art Commission have placed upon the walls of the main corridor Mural paintings, consisting of the burning of the Peggy Stewart in Annapolis Harbor, thus adding much to the beauty of the building on the second floor.

I have endeavored to pay special attention to the cleanliness of the buildings under my supervision, and think in this respect that the buildings compare favorable with public buildings generally.

One unfortunate condition existing is that the present force is inadequate to do the work as well as I would like it to be done in the several buildings, and would therefore suggest that the following increases be allowed: City Hall, two extra watchmen and three charwomen; City Hall Annex, one extra watchman; Courthouse, five extra charwomen.

These recommendations seem to be absolutely necessary, as the City Hall should be properly cared for, and the watchmen in the Annex would be required to work eight hours a day instead of twelve, as now required of them. The Courthouse would be better cared for, as the present allotment is not sufficient to do the work efficiently.

I am endeavoring to conduct the department on an economical, business basis, and trust my efforts will produce results which will receive both your own and the public's approval.

Very respectfully yours, &c.,

GEO. F. JONES,
Superintendent Public Buildings.

REPORT

—OF THE—

CITY LIBRARIAN

—TO THE—

Mayor and City Council of Baltimore

—FOR THE—

YEAR ENDING DECEMBER 31, 1904.

BALTIMORE, MD.
WM. J. C. DULANY COMPANY,
CITY PRINTERS.

1905.

City Librarian's Report.

DECEMBER 31, 1904.

To the Honorable the Mayor and City Council of Baltimore:

The year just closed has been highly satisfactory from the Librarian's standpoint.

First—Because at the end of 1904 there was a balance on the right side of the books, and that, despite the extraordinary demands made upon the Library as a result of the fire, expenditures for stationery, blank books and printing, were less than the year preceding.

Second—Because the Library has developed (I hope) in other respects, and has made progress in the fulfillment of its original mission—to wit: The proper preservation of the city records, documents and archives.

Those responsible for the creation of the Office of Librarian had this latter work in view, but, unfortunately, the purchasing department feature has taken precedence. Hence, the Library while supplying necessities for other departments overlooked the fact that a few dollars could be spent to an advantage upon itself.

There has been progress during the year toward indexing and the classification of documents, but much remains to be done. There is in the custody of the Librarian papers of a century. Others are accumulating daily—sent in by various departments—to say nothing of the bulk turned over by the clerks of the Council at the end of each session. It was somewhat of an undertaking to attack this mass with a hope of whipping it into shape, but, as stated, considerable progress has been made. This work, I might add, is being done by the Library force in connection with its other duties, and with little or no extra expense.

Through the co-operation of His Honor the Mayor and the cordial support of the Board of Estimates the Librarian has been enabled to have various old maps and plats of the city redrawn, that the originals might be preserved. Some of the latter are of the Baltimore Town period or thereabout. Nearly all are a century or older. These have been traced and blue prints made. The prints may be seen, but the originals have been placed where they will not be handled except for extraordinary reason. But there is more of this kind of work. The Librarian is desirous of establishing a general plat room, and to gather there all the plats of the municipality, so that it will not be necessary for those desiring to consult maps to run from one department to another in quest of such city records.

I take pleasure in announcing that various autograph documents of James Calhoun, First Mayor of Baltimore, have been collected, and have been arranged in an album, which is nothing if not unique. It occurred to me that as First Mayor, James Calhoun's writings possessed peculiar historic value, if nothing else. All his papers that could be found were "rescued." These begin with his first message to the Council just after the incorporation of the city in 1797. The papers are safely, and, I believe, artistically preserved in a big album especially made.

The first page is adorned with a picture of the First Mayor, a reproduction of a portrait in the First Branch Council Chamber.

There are various papers and relics in possession of the Librarian, which will make an interesting collection when a place to properly exhibit them is provided. Until such a time the exhibition had better be postponed.

It was anticipated—at least the Librarian anticipated—that as a result of the fire expenditures by the Library would be several thousand dollars more than under normal conditions. As a matter of fact, demands made upon this department were greatly increased, but owing to the "item plan" of giving out

contracts, inaugurated shortly after the present Librarian came into office, the necessity for an extra appropriation did not materialize, and in spite of the fire a small balance was turned into the sinking fund instead of calling for help from the Board of Estimates. Apropos of the above, I might state that bids for stationery, blank books and printing for 1904 were rejected December 23, 1903, and it was necessary to buy in the open market at the beginning of the ensuing year.

This continued until April 26, 1904, when contracts were awarded by the special board which considers proposals received by the City Librarian.

When bids were solicited the second time there was a change in the specifications which eliminated proposals for bulk quantities, or for whole departments. The "item plan" was instituted, and this made it possible for dealers in supplies (such as required by the Library) to bid whether great or small. The plan worked admirably, and demonstrated that, unhampered by unfair contracts, the city can buy more reasonably in the majority of cases than private individuals. In no case is it compelled to pay more.

I append herewith a detailed statement of the expenditures and receipts of the Library during the year 1904.

Very respectfully yours,

WILBUR F. COYLE,

City Librarain.

FINANCIAL STATEMENT.

CITY LIBRARY.

Expense Account.

Departments.	Stationery.	Printing.	Blank Books.	Total.
Appeal Tax Court	$ 82 08	$ 78 70	$207 75	$368 53
Baltimore City Jail	133 63	200 23	77 65	411 51
Board of Estimates	7 32	10 75	.....	18 07
City Collector	145 11	1,115 51	523 82	1,784 44
City Comptroller	49 41	97 25	53 14	199 80
City Engineer	272 77	450 90	330 36	1,054 03
City Library	322 79	156 75	85 25	564 79
City Register	71 12	99 29	249 93	420 34
City Solicitor	94 17	77 06	11 20	182 43
Com. of Free Baths	12 34	38 45	17 30	68 09
Com. of Opening Streets	16 01	12 00	.....	28 01
Com. of Street Cleaning	81 48	178 60	14 19	274 27
Board of Fire Com'rs	135 78	288 29	927 02	1,351 09
Harbor Board	36 10	42 05	5 25	83 40
Commissioner of Health	177 10	1,024 39	689 25	1,890 74
Inspector of Buildings	89 52	472 60	455 15	1,017 27
Mayoralty	70 52	93 00	9 20	172 72
Supt. of Lamps & Lighting	70 88	144 35	57 50	272 73
Supt. of Public Buildings	18 84	45 80	29 32	93 96
Superv'rs of City Charities	98 04	290 59	129 40	518 03
School Board	.....	1,773 87	423 95	2,197 82
Topographical Survey	128 07	14 50	.....	142 57
	$2,113 08	$6,704 93	$4,296 63	$13,114 64

AMOUNT EXPENDED FOR OTHER DEPARTMENTS.

DEPARTMENTS.	Stationery.	Printing.	Blank Books.	Total.
City Collector	$1 00			$1 00
Appeal Tax Court	9 48			9 48
City Engineer		$ 24 00		24 00
Com. of Street Cleaning		148 96		148 96
Com. of Finance	22 50		$17 00	39 50
Col. of W. Rents & Licenses	337 32	660 85	367 90	1,366 07
Burnt District Com	224 96	361 15	87 72	673 83
Electrical Commission	132 53	217 25	300 18	649 96
Board of Fire Com'rs		16 25	500 00	516 25
Harbor Board	72 09		6 75	78 84
Inspector of Buildings	1 20			1 20
*Mayoralty			215 00	215 00
Park Board	97 32	343 50	257 00	697 82
School Board		278 80		278 80
Water Engineer	409 15	551 25	581 93	1,542 33
	$1,307 55	$2,602 01	$2,333 48	$6,243 04

*Included in this expenditure is $46.00 for pictures of Burnt District.

SALARY ACCOUNT.

Librarian's salary	$1,500 00
First Assistant's salary	900 00
Second Assistant's salary	750 00
	$3,150 00

SUMMARY.

Amount appropriated for stationery, printing and books various departments		$14,249 32
Amount appropriated for salary		3,150 00
Amount appropriated for restoring old maps and plats		500 00
Amount expended for restoring old maps and plats	$385 00	
Amount reserved for same to be expended during 1905	115 00	
Amount expended for stationery, printing and blank books	13,114 64	
Amount expended for salaries	3,150 00	
City Library expenses—Expresses, advertising and postage	310 38	
Surplus funds	824 30	
	$17,899 32	$17,899 32

Cash receipts for the year $151 00

FORTY-FIFTH ANNUAL REPORT

—OF THE—

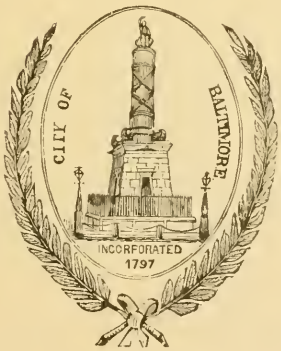
Commissioners for Opening Streets

—TO THE—

MAYOR AND CITY COUNCIL OF BALTIMORE

—FOR THE—

FISCAL YEAR ENDING DECEMBER 31, 1904.



BALTIMORE, MD.
WM. J. C. DULANY COMPANY,
PUBLIC PRINTERS.

1905.

REPORT

OFFICE OF THE COMMISSIONERS FOR OPENING STREETS.

BALTIMORE, January 1, 1905.

To the Honorable the Mayor and City Council of Baltimore.

GENTLEMEN:

We have the honor to submit to you a statement of the operations of this Department from January 1, 1904, to December 31, 1904, inclusive.

The following lists comprises the streets, alleys, etc., in process of opening and closing.

STREETS, ALLEYS, ETC., IN PROCESS OF OPENING.

NAMES OF STREETS.	NO. ORD.	APPROVED.
*Morton alley, from John st. to Hoffman st	96	May 25, 1882
*Henry st., from Clement st., to Fifth lane	77	May 14, 1885
*Elizabeth lane, from Randall st. to Heath st	54	May 2, 1888
*Dallas st., from Oliver st. to Hoffman st	115	Oct. 16, 1888
*Ropewalk lane, from Randall st. to Heath st.	36	April 26, 1889
*Towson st., from Fort ave. to Marriott st.	70	May 23, 1889
*Florence st., from Fulton ave. to Retreat st	99	June 8, 1889
*Francis st., from Retreat st. to Whitelock st	101	June 8, 1889
*Morris alley, from North ave. to Druid Hill Park	103	June 8, 1889
Stoddard alley, from Mosher st. to McMechen st	148	Oct. 9, 1889
*Nicholson st., from Decatur st. to Cooksie st	161	Oct. 28, 1889
Ridgely st., from Ostend st. to Gwynn's Falls	77	May 8, 1891
*An alley 10 ft. wide, from Second st. to First st.	111	June 4, 1891
*Neighbor st., from McKim st. to Greenmount av.	106	May 28, 1894
An alley 15 ft. wide, from Gold st. to Bloom st.	23	Mar. 6, 1893
*Windsor ave., from North ave. to Clifton ave.	26	Mar. 20, 1894
*Canton ave., from Cannon st. to Luzerne st	67	May 15, 1895
*Wolfe st., from North ave. to Clifton Park	112	Nov. 11, 1898
*An alley 10 ft. wide, from Orleans st. to Jefferson st., bet. Central ave. and Eden st	29	April 5, 1898
*An alley 9 ft. 9 in. wide, from Monument st. to an alley 10 ft. wide, bet. Caroline st. and Spring st	29	April 5, 1898
*An alley 10 ft. wide, from the south side of Madison st. to an alley 10 feet wide, bet. Caroline st. and Spring st	29	April 5, 1898
*An alley 10 ft. wide, from the north side of Madison st. to the south side of Chew st., bet Caroline st. and Dallas st.	29	April 5, 1898
Abell st., from the north side of Thirty-first st., or Waverly ave. to the southwest side of Merryman's lane	69	June 10, 1902
Madeira st, from Oliver st. to Federal st	31	Mar. 5, 1902
Ostend st., from the west side of Race st. westerly to the intersection of Stockholm st.	128	Aug. 11, 1904
Stockholm st., from the east side of Leadenhall st. to the intersection of Ostend st	129	Aug. 11, 1904

*Recommended for repeal.

EETS, ALLEYS, ETC., IN PROCESS OF CLOSING.

Names of Streets.	No. Ord.	Approved.
Point lane, from Ensor st. to North ave	84	May 23, 1882
*Valley, from Barre st. to Welcome alley	91	Oct. 8 1885
Butchers' lane, from Calhoun st to North ave	61	May 2, 1888
*Fourth lane, from Hanover st. to Light st	22	Mar. 29, 1889
*Brown's lane, from Eden st. to Caroline st	111	June 10, 1889
Clifton Place, from Truxton st. to Eager st	111	Oct. 17, 1892
Grove st., from Truxton st to Eager st	111	Oct. 17, 1892
Truxton st., from Forrest st. to Concord st.	111	Oct. 17, 1892
Half Moon alley, from west of Chesnut st	99	May 25, 1891
*Comet street from a 10-foot alley to a fence corner there situated	103	May 27, 1891
*An alley 33 feet wide, from York rd. to about 138 ft. south of Huntingdon ave	25	Mar. 6, 1893
*An alley, from Madison st. to an alley 10 ft. wide, bet. Eden st. and Spring st	29	April 5, 1898
West Falls lane, from Wells st. to a point 85 ft. 7 in. southerly	88	June 7, 1899
Apple or Jew alley, from the south side of Monument st. to the north side of the Old Joppa rd	99	Nov. 24, 1902
Meyers st., bet. the east side of Jackson st and the southwest side of Fort ave. and the north west side of Webster st	49	Mar. 7, 1904
Meyers st., from Covington st. to Jackson st	50	Mar 12, 1904

*Recommended for repeal.

J. ARTHUR WICKHAM,
HENRY YEWELL,
JAMES H. MARINE,
Commissioners.

EUGENE F. RODGERS, *Clerk.*

ANNUAL REPORT

—OF THE—

CITY ENGINEER

—TO THE—

MAYOR AND CITY COUNCIL OF BALTIMORE

—FOR THE—

FISCAL YEAR ENDED DECEMBER 31, 1904.

BALTIMORE, MD.
WM. J. C DULANY COMPANY,
CITY PRINTERS.

1905.

OFFICERS

—OF THE—

CITY ENGINEER'S DEPARTMENT

B. T. FENDALL.....City Engineer.
GEO. M. BOTELER.....Chief Clerk and Paymaster.
JAMES R. DUNLOP.....Permit Clerk
JOSEPH S. CLARKE.....Bookkeeper.
WM. L. PROUTT.....Stenographer.
W. S. WOOD.....Messenger and Clerk.
ALFRED HOLLYDAY.....General Inspector.
GEORGE H. ZIMMERMAN.....Inspector.
WILLIAM T. GARRETT.....Inspector.
A. MATTHEWS.....Inspector.
GEORGE A POWERS.....Inspector.

Sub-Division of Bridges and New Paving.

O. W. CONNET.....Assistant City Engineer.
FRANK K. DUNCAN.....Assistant Engineer.
R. M. COOKSEY.....Assistant Engineer.
THOMAS C. HARRIS.....Draughtsman.
L. C. MILLER.....Clerk.
JOSEPH B. MAGUIRE.....Footway Inspector.

Sub-Division of Sewers.

NEWTON M. GRAY.....Assistant City Engineer.
R. K. COMPTON.....Assistant Engineer.
JOHN S. PATTERSON.....Assistant Engineer.
HENRY F. SIEMERS.....Draughtsman.
W. S. TAYLOR.....Clerk.
J. J. O'LEARY.....Superintendent.

Sub-Division of Street Repairs.

JAMES A. PAIGE.....Assistant City Engineer.
B. LATROBE WESTON.....Assistant Engineer.
JOSEPH GREENBAUM.....Assistant Engineer.
J. H. DUVALL.....Clerk.
JOHN F. IRETON.....Paving Inspector.
CHAS. A. HEIL.....Superintendent City Yard.
SAMUEL MILLER.....Assistant Supt. City Yard.

Sub-Division of Grading, etc., in Burnt District.

JOHN S. DOYLE.....Engineer.
THOMAS L. HINES.....Rodman.
H. B. SOPER.....Clerk.

INSTRUCTIONS TO FOREMEN AND OTHER EMPLOYES.

1. Foremen must be on the ground not later than 7.45 A.M. in order that the work may begin promptly at 8 o'clock.

2. Eight hours constitute a day's work, and each man will be allowed only for the actual time worked.

3. The hours for every working day will be from 8 o'clock A.M. until 5 o'clock P.M., with one hour, 12 o'clock noon to 1 o'clock P.M., for dinner. On Saturdays the hours may be from 7 A.M. to 4 P.M.

4. Gangs must not be worked overtime if it can be avoided.

5. Foreman must not leave the work without permission. If anything is needed, report it to the engineer in charge, his assistants, or send a message to the City Hall. When necessary for Foremen or men to be at the City Hall, business must be promptly transacted; they will not be allowed to remain in or about the Hall.

6. Foremen will be held responsible for the amount and character of work done, and for the orderly behavior and industry of their men.

7. Foremen must lay out the work for their men and not select a paver to act as boss paver over the other men.

8. Foremen must not allow mechanics, pavers, rammers or carters to work as laborers, except at the wages of a laborer, unless expressly authorized to do so by the Engineer in charge.

9. Work must be so planned as to obstruct travel and inconvenience the public as little as possible. Refuse material must not be allowed to accumulate on the work. Streets must be in safe condition when the force leaves, and the proper lights and guards set.

10. A careful record must be kept of each man's time, with the dates, location, kind of work, and all facts necessary to make up correct pay-rolls and accounts of the work, and reported to the Engineer in charge or his assistants.

11. Foremen must keep a careful record of all tools and materials received and delivered; they will be held responsible for the economical use of materials, and must account for all losses and breakage of all tools. All broken or worn-out tools must be returned to the Property Yard.

12. No repaving must be done on rainy days, when the ground is soft, and the sand too wet. No time to be allowed on rainy days except for service rendered.

13. It must be the constant effort to have good work done at the least cost to the city.

14. As little time as possible must be lost in moving from one job to another, and Foreman must learn in advance where they are to go next.

15. Any employe who shall absent himself from the work, without good and sufficient cause, will be dismissed and his place filled by another man.

16. Any employe found under the influence of liquor, or using profane and abusive language, negligent, insubordinate, or in any way interfering with or obstructing the work, shall be promptly suspended by the Foreman. A written report, giving the facts in the case, must be immediately transmitted to the Engineer in charge, signed by the Foreman.

17. Foremen must not frequent saloons under any pretext whatever during working hours, nor permit any one under their charge to do so. Anyone not complying with this order will be liable to dismissal.

18. All orders or tickets for material on Property Yard, or on Contractors, must be written and signed by the Foreman.

19. Foremen will in all cases make written reports of any accident, of however trifling a nature, that may occur on their work, giving date, names and addresses of witnesses, etc.

20. Any employe on the work who shall solicit contributions of Contractors furnishing material, or of any other person, will be dismissed at once.

21. Foreman will be provided with copies of specifications for materials, and must carefully read the same, and must accept only material in accordance with said specifications.

22. The use of the city's tools or materials by any one, in doing private work in or out of working hours, is strictly forbidden; any violation of this order will be followed by immediate dismissal.

23. Foremen must carefully read the foregoing rules, familiarize themselves with them, and see that those employed under them also fully understand the rules.

REPORT

DEPARTMENT OF PUBLIC IMPROVEMENTS,
SUB-DEPARTMENT OF CITY ENGINEER.

BALTIMORE, MD., January 1, 1905.

To the Honorable the Mayor and City Council of Baltimore:

GENTLEMEN: I respectfully submit the following report of the operations of the City Engineer's Department for the year 1904.

WORK IN THE BURNT DISTRICT.

On account of the fire of February 7 and 8, the amount of work handled by this Department has been greatly increased. First, in clearing the streets of debris and opening them to traffic; second, in removing weak walls and other dangerous structures, which rendered the streets unsafe; and, third, in grading and repaving the streets as directed by Ordinance No. 113, approved July 8, 1904.

Before the fire was extinguished steps had been taken for the organization of a large force of laborers for clearing the streets. By February 10, the work was started, and in one week the principal streets were open for vehicles.

Most of the dangerous walls were removed by the use of dynamite, but many were taken down with cables and steam power. Nearly all of this work was handled by the engineers in the Department with promptness and skill. Notwithstanding the exceedingly dangerous character of the work, there were no accidents worthy of mention; no man having been disabled for longer than a day.

As soon as the work of putting the District in safe condition was completed and the engineers could be withdrawn for other duties, they were instructed to run out lines of levels

for each street, making up profiles of the several streets, showing the elevation of the curbs at every street corner and alley crossing. This was done in order that a comprehensive plan for rearranging the grades of all streets and alleys might be prepared and submitted to the Council for approval. After a most careful and exhaustive study of the problem, such a plan was prepared and submitted to the Council, but not approved in its entirety. The plan submitted had three very radical changes, which were not accepted, viz :

(*a*). A uniform grade of one and seven-tenths per cent. on Lombard street, from Charles street to Liberty street; the cutting down of Sharp street or Hopkins Place, from German street to Pratt street to meet Lombard street, and the filling up and cutting down of Hanover street. This scheme required a cut of ten feet at the intersection of Sharp street and Lombard street, and a fill of six feet on Hanover street, between Lombard street and Pratt street.

(*b*). A cut ten feet deep at the intersection of St. Paul street and Fayette street, with a descending grade on Fayette street to Calvert street of two per cent., and an ascending grade on Fayette street to Charles street of one and seven-tenths per cent.; St. Paul street descending from Lexington street to Baltimore street, and meeting the Fayette street grade.

(*c*). A uniform grade of eight-tenths of one per cent. on Baltimore street, from Frederick street to the Bridge over Jones' Falls; with a fill of seven feet at Harrison street; Harrison street and Centre Market Space to meet Baltimore street by easy grades to the north and south respectively.

After the question of grades had been finally settled, and the money provided for regrading and repaving the Burnt District, forces were organized for carrying out the mandates of the ordinance, and the actual work of regrading and repaving was begun July 15, under the charge of Assistant City Engineer Paige. It soon became evident that one man

could not attend to the duties placed upon Mr. Paige; either the general repairs of all roads, streets and alleys throughout the city had to be neglected, or the Burnt District work neglected. Neither proposition could be considered; hence it was decided to relieve Mr. Paige of the Burnt District and put it in charge of a competent man reporting directly to the head of the Department. The man selected for this important and onerous position was Mr. John S. Doyle, who took charge August 29. The work accomplished by him between the date of his appointment and January 1, 1905, indicates that Mr. Doyle is entirely competent, as well as faithful and energetic, and fully equal to the task.

The work done in the Burnt District is fully set forth in detail, both as to character and cost, in Mr. Doyle's report, and may be briefly summarized, as follows:

The grading, with the exception of Fayette street, part of St. Paul street and a small amount on Lexington street, is practically finished. Baltimore street regraded and repaved with Belgian blocks on a six-inch concrete base, from Liberty street to Calvert street, and from Holliday street to Jones' Falls Bridge; new armored concrete curb set from Liberty street to Gay street, and all damaged curb removed and replaced with good curb, from Gay street to Jones' Falls. Light street graded, paved and curbed to the new width, from Pratt street to Baltimore street. Calvert street graded, paved and curbed, from German street to Pratt street. Lombard street graded, paved and curbed, from South street to Charles street. German street graded, paved and curbed, from South street to Grant street. Centre Market Space, with the streets intersecting, graded; the fill on "The Space," at Water street, was nearly six feet, running out to one foot at Baltimore street and to nothing at Lombard street, containing 6,500 cubic yards of material. In addition to these large and important pieces of work a number of small streets have been curbed and paved, as will appear in Mr. Doyle's report (Pages 237 to 267.)

Unusual difficulties were encountered with all of the work done in the district. Substructures had to be cared for, either by the other city departments to which they belonged or by the various corporations. Builders had to be considered as far as possible and provision made for street traffic. By mutual co-operation and concessions the work was pushed through, so far as it has progressed, with very little friction. It is believed that the worst of our difficulties are behind us, and the hope is confidently entertained that the work of regrading and repaving the Burnt District will be completed by September 1, 1905.

In addition to the grading and paving done in the Burnt District, several storm water drains and corner inlets have been provided, which remove cross gutters at several intersections, rendering the streets safer and more convenient for traffic.

NEW PAVING.

The only piece of improved paving done during the year, and paid for out of the tax levy, was the asphalt block laid on McComas street, from Hanover street to Creek alley. The blocks used were three inches thick, laid on a four inch concrete and cement mortar bed, and curbed with a five-inch gneiss curbing. The total cost of the work, including advertising, inspection, special ditches and pipe drains, was $9,713.25. The appropriation made by the ordinance was $13,800.00. The balance, $4,086.75 was turned over to the Comptroller.

One piece of cobble and several pieces of macadam paving were done, and paid for by the abutting property owners; the city paying for the intersections.

The cobble paving was done on Chase street, from Patterson Park avenue to Milton avenue, under Ordinance No. 158, of 1903. Portions of Chase street, between the streets named, had been previously paved with cobble and curbed, but not properly graded. The street was graded to true grade; the

curbs redressed, and the whole space, covered by the ordinance, paved at a cost of $3,554.59, of which amount $1,088.30 was charged against the appropriation for "Paving and Repairing Cross Streets," Ordinance of Estimates for 1904, and the remainder, $2,466.29, was assessed against the abutting property.

The streets paved with macadam are: Twelfth street, from Windsor Mill road to Windsor avenue; Clifton avenue, from Tenth street to Chelsea Terrace, is completed as far as Twelfth street; the work west of Twelfth street has been stopped pending the passage of a supplementary ordinance, widening the driveway to forty feet and authorizing a new assessment covering the new width; Tenth street, from Windsor Mill road to Chesapeake avenue, is partly completed, the work having been stopped December 9th by bad weather. Details giving very full and complete information in connection with this and all other new paving work will be found in the report of Assistant City Engineer Connet, herewith.

Several intersections have been paved where improved pavements had been laid in the street on each side by the property owners, and in this way continuous smooth driveway was provided and unsightly mud holes removed.

Several small pieces of improved pavement were laid in front of new schoolhouses, and paid for out a "Special Fund," provided for the purpose in the Ordinance of Estimates for 1904.

REPAIRS TO BRIDGES AND CULVERTS.

The numerous bridges and culverts throughout the city have received careful attention and been kept in thorough repair.

The principal piece of bridge repairing done during the year was the boxing-in of the floor beams, and buckle plates between, of St. Paul street bridge, to protect the iron from the deleterious effects of the gasses thrown out by the engines

of the Pennsylvania Railroad. Paint will not protect the iron on this bridge, for the reason—that the "Sand Blast" effect from the "Exhaust" of passing engines, soon cuts the paint off and leaves the iron bare and unprotected, from the action of condensed steam and sulphurous compounds from the combustion of coal. An inspector may move through the spaces between the boxing and the bridge, carefully examine the iron, clean and paint it, if found necessary, thus avoiding the expense of scaffolding. A similar plan would have been adopted at the South Monroe street bridge, over the Baltimore and Ohio tracks, but an insufficient headway rendered it impracticable. With the view of more effectually protecting this bridge, it has been painted with a very heavy coat of a specially prepared elastic coal tar paint, from which good results are confidently expected.

The policy, which has been pursued for several years, of replacing plank floors on bridges with more durable material (vitrified brick or creosoted wooden block) and the replacing of small wooden bridges with brick, stone or concrete arches, is still being followed. The good effects of the policy are becoming manifest in decreased appropriations for the "Repairs and Maintenance of Bridges."

The most important piece of work in reconstructing bridges was the reconstruction of the bridge on West Lexington street. This bridge, as originally constructed, consisted of a wooden superstructure resting on rubble masonry abutments, providing for a width in the street of only thirty six feet, on the south side, for sidewalks and driveways. The timbers and flooring were rotten, and the masonry so bad as to render rebuilding necessary. After a careful investigation the conclusion was reached, that the best and cheapest structure would be a concrete arch, reinforced with Kahn bars; length of the arch to be sixty-six feet (the entire width of the street, between building lines) filled over to sub-grade of the street, paved and curbed, with the necessary inlets to carry off the storm water, and the necessary parapets and wing walls. The total cost of the work was $3,068.53.

On Montebello avenue, just north of the Baltimore and Ohio Railroad tracks a wooden box culvert was replaced with a concrete arch six feet in diameter, with side walls four feet high, costing $791.26. The low cost of the work is due to the fact that we were able to use the stone, gravel and sand in the bed of the stream for the concrete, and thus save the cost of crushed stone.

The wooden bridge on Dorsey's lane was replaced with a concrete segmental arch, with a span of nine feet four inches, rise three feet nine and one-half inches, and side wall five feet high, costing $1,203.32. All three of these arches are strong and substantial, and should last for years without repairs of any sort.

Assistant City Engineer Connet in his report gives a very full, detailed description of these arches and the various items of cost in connection therewith; also similar statements covering the various pieces of repair work on bridges throughout the city.

CONSTRUCTION AND REPAIRS OF SEWERS.

The Sewer Department, under the charge of Assistant City Engineer N. M. Gray, has done a large amount of work during 1904. About one and five-eighths miles of storm water sewers have been constructed during the year. They are circular in section, varying in size from a diameter of twenty inches to a diameter of nine feet. Connecting with them, forty-one inlets, or catch basins, were constructed to take the water from adjacent gutters. The amount appropriated for these sewers was $56,232. The actual cost was $52,341.61. The difference, $3,890.39, was turned over to the Comptroller as an unexpended balance.

The difference between the actual and estimated cost is accounted for in two ways: 1st. We expected in several cases to use special foundation work and timbering, but when the excavations were opened, these special appliances were considered unnecessary and abandoned; and, 2d., certain

materials were purchased at a lower figure in 1904 than in 1903. The estimates were made on the contract prices for 1903.

In addition to the new sewers constructed, the efficiency of those already built has been increased by the construction of seventeen new inlets, costing $4,014-76. Ninety-three existing inlets have been provided with man-holes to facilitate clearing and insure better sanitation during the summer months.

Since March 1, 1900, more than four and one-half miles of storm water sewers have been constructed, which is one-tenth of the entire mileage of January 1, 1905. During the same period, eighty-seven new inlets to existing sewers have been built; thirty-eight have been trapped to prevent the escape of gas, and two hundred and eighty have been provided with man-holes. All of this work was paid for out of the tax levies for the five years from 1900 to 1904, inclusive.

In addition to the construction of sewers in 1904, a large amount of repair work was done to the system where found necessary. The most important pieces of repairing done are, as follows: Repairs to Central Avenue Sewer, from a point south of Lombard street, northward for a distance of one hundred and forty-six and a-half feet. The work done was reconstruction rather than repairs. The old sewer was replaced with a new one of different section, stronger and better as to workmanship and material, with an increased capacity. Since March, 1900, this sewer has been re-constructed from a point about fifty feet south of Bank street, northwardly to the north side of Lombard street, excepting a section about one hundred and seventy-five feet long, between Lombard and Granby streets, which was in fairly good condition; with the repairs already made to it, this section will be entirely safe for sometime to come. The total length in lineal feet re-constructed is one thousand, three hundred and forty-five and one-half feet. The sections north of Lombard street are in fair condition and call for no special attention at present.

The old wooden box sewer on Merryman avenue, from York road to Barclay street, has been replaced with a 30-inch terra cotta pipe, with the necessary inlets. At Barclay street it is connected with the Barclay street sewer, forming a lateral in the Sumwalt Run drainage basin.

Wooden bottoms in Lovegrove alley, Centre street, North avenue and Chester street sewers have been replaced, where necessary, with granite blocks, laid in cement. The wooden floors are most undesirable and expensive to maintain; the granite block construction is far better and practically indestructible. The work of removing wooden bottoms has been in progress for the last five years and will be continued in the future as found necessary.

Mr. Gray's report (pages 121 to 149) gives very full and complete details as to character, location and cost of all work on sewers during the year. Changes and additions to sewers in the "Burnt District" were handled by Mr. Gray and his report gives full and complete information regarding them also.

REPAIRS OF ROADS AND STREETS.

Much repair work has been done on the roads, streets and alleys throughout the city.

Owing to the unusually severe winter the condition of the cobblestone streets, when spring opened, was worse than at any time within the last five years, and in order to get them in safe condition as quickly as possible the methods of previous years had to be modified to meet the unusual conditions. Heretofore we have been able to repave cobble streets for considerable distances from curb to curb, throwing out poor and worthless materials and replacing them with new. Very frequently the contour of the street was greatly improved and the work done was of such a character as to insure its lasting for a long time without repairs. In the spring of 1904, however, we had so many bad places in cobble streets over the entire city that the only feasible plan was to patch

up the worst places, so as to insure some degree of safety as quickly as possible. This will explain the large amount of patch work done by the Department in 1904 as compared with previous years. The cost of patching small holes is greater per unit than the cost per unit of repaving larger areas. It is a pleasure to note, however, that the cost of cobble paving per unit this year, notwithstanding the patching, is about the average for preceding years. In amount the number of square yards of cobble repaving done this year was about 50 per cent. in excess of last year. In 1903 very little Belgian block paving was done (about 11,000 feet). This year it amounted to 310,000 feet more than double the *normal* amount.

The area of asphalt blocks repaired this year was nearly double the average.

To meet these unusual conditions, it was necessary to reduce the purchases of new material. Old cobble stones, too small for first-class work, were used again, short gutter stone and poor curb were reset and badly worn Belgian blocks were relaid.

The extensive repairs to sheet asphalt in 1903 put the paving of this class in excellent condition, and, hence, the expenditure on this account this year was far below the previous year. The street work for the year, while not entirely satisfactory, is probably the best that could be done under the circumstances.

Experiments have been made during the year with plain concrete and armoured concrete blocks as a substitute for the ordinary hammer dressed gutter stone. The blocks have not been in use long enough to know what results will be obtained. So far they are satisfactory. They are much cheaper than stone, and if they prove sufficiently durable, will save money and make a better gutter. Tables giving location, cost of labor and material, with other valuable information in connection with street repairs will be found in the report of Mr. James A. Paige, Assistant City Engineer (pages 153 to 233).

The United Railways and Electric Company have done considerable work during the year in renewing rails and special work on several lines. They have also remodeled and improved their drains at a number of intersections. Where they renewed rails on track, designed for cable power, the very objectionable "slot" has been removed. So far one and one-quarter miles of slot have been removed by the Railway Company.

The Pennsylvania Railroad and the Baltimore and Ohio Railroad have done no work of any importance in the matter of laying new tracks on the streets.

The Western Maryland Tidewater Railroad Company have about completed their work along Donaldson and Gould streets to their new pier.

The Steam Heating and Refrigerating Company have laid a number of new conduits during the year. They now cover quite an extensive territory in the business part of the city and are heating many new buildings in the Burnt District.

The Chesapeake and Potomac Telephone Company have extended their underground system and have laid a number of new conduits, getting rid of objectionable poles thereby.

The work done by the office force this year is largely in excess of previous years. Four thousand nine hundred and ninety-one permits were issued in 1903 against eight thousand and fifty-seven permits in 1904.

The large expenditures in the Burnt District made extra work for the Chief Clerk and Paymaster, and the Bookkeeper. Sales of "old material," "dump tickets," etc., are handled by the Chief Clerk. $8,267.96 from these accounts were turned over to the Comptroller for the year. The sales of old material, outside of the Burnt District, consisting principally of old Asphalt blocks, are about thirty-nine per cent. in excess of any year since January 1, 1900.

The Chief Inspector of the Department has been indefatigable in his efforts to get a true and correct list of all

poles in the city, subject to taxation, and his efforts have resulted in a material increase of revenue, more than sufficient to pay the Inspector's salary.

An unusual number of private drains have been constructed during the year, as shown in table, on page 23. This work was done under the supervision of this Department as provided by law.

Before closing this report, I desire to thank the heads of other departments, their assistants and subordinates, for their uniform courtesy and kindly aid under the trying conditions of the past year.

My thanks are also due to my assistants and those under them, for the ability and loyalty with which they have aided me during the year. The strain on the officers and men of the Department, since the "Great Fire," has been very heavy, but so far they have been able to meet emergencies as they arose, and I have every confidence in their ability to perform successfully any duties to which they may be assigned.

B. T. FENDALL,
City Engineer.

GENERAL INFORMATION.

The total mileage and area of paved and unpaved streets and alleys in the City of Baltimore, corrected to December 31, 1904, is as follows :

Kind of Surface.	Streets.		Alleys.		Totals.	
	Mileage.	Sq. Yds.	Mileage.	Sq. Yds.	Mileage.	Sq. Yds.
Cobblestone	264.4	4,487.204	109.0	757,069	373.4	5,244,273
Belgian block	43.1	816,190	.....	.....	43.1	816,190
Sheet asphalt	9.2	224,456	.....	.....	9.2	224,456
Asphalt blocks.	11.7	278,382	0.1	400	11.8	278,782
Vitrified brick	4.6	85,053	0.5	3 717	5.1	88,770
Mosaic block	1.8	25,770	.....	.....	1.8	25,770
Wooden block	0.2	3,812	.....	.....	0.2	3,812
Macadam	48.0	637,332	.....	.....	48.0	637,332
Unpaved	47.7	818,473	6.2	53,083	53.9	871,556
Totals	430.7	7,376,672	115.8	814,269	546.5	8,190,941

NOTE.—The classification here made is : Where the thoroughfare is paved and curbed and footways provided it is called a street, regardless of its width.

All thoroughfares twenty feet and under which are not curbed, paved and provided with sidewalks are classified as alleys.

AREA OF THE CITY.

Land area	30,141 square miles.
Harbor area	1,507 " "
Total area	31,648 " "

ELEVATION ABOVE MEAN LOW TIDE.

The highest elevation in the city is near Garrison and Oxford avenues, West Arlington	461.0 feet.
Elevation of street pavement at the base of Washington Monument	99.3 "

LENGTH OF CITY SEWERS.

Brick sewers	28.63 miles.
Stone sewers	6.25 "
Concrete	.55 "
Terra-cotta pipe sewers	7.30 "
Cast-iron pipe sewers	2.90 "
	45.63 "

The above does not include the length of sewers owned by private parties.

Statement of Permits Issued by the City Engineer's Department During the Year 1904.

The permits issued during the year numbered 8,057, an increase of 3,066 over that of 1903. Classified they are as follows:

To the Consolidated Gas Co. to lay service pipes	1,902
To the Consolidated Gas Co. to repair service pipes	1,231
To the Consolidated Gas Co. to lay mains	189
To the Consolidated Gas Co. to repair mains	354
To the Water Department to open improved streets	91
To the Baltimore County Water and Electric Co. to lay service pipes	9
To the Baltimore County Water and Electric Co. to repair service pipes	1
To the Baltimore County Water and Electric Co. to lay mains	7
To the Baltimore County Water and Electric Co. to repair mains	5
To construct telephone conduit and manholes	119
To change and repair telephone conduit and manholes	43
To lay refrigerating and heating mains	9
To repair refrigerating and heating mains	2
To lay refrigerating and heating services	36
To construct railway tracks	13
To change and repair railway tracks	38
To lay steam and other pipes	16
To repair steam and other pipes	17
*To lay drain pipes	534
To clear and repair drain pipes	412
To dig test holes	9
To open footways to lay water supply pipes	480
To open footways to repair water supply pipes	746
To open footways to lay waste water pipes	413
To open footways to repair waste water pipes	92
To erect, replace, change and renew telegraph poles	15
To remove telegraph poles	4
To erect, replace, change and renew telephone poles	148
To remove telephone poles	51
To erect, replace, change and renew electric line and lamp poles	280
To remove electric line and lamp poles	37
To erect, replace, change and renew trolley poles	35
To remove trolley poles	3
To erect, replace, change and renew police and fire alarm poles	3

To erect, replace, change and renew barber and hitching posts..	10
To reset and straighten curb	86
To renew curb	13
To cut curb	6
To repair and repave footways	41
To construct and repair driveways across footways	77
To plant trees along footways	87
To curb streets	8
To pave street	1
To repair streets	22
To temporarily obstruct footways and streets	253
To place gasoline tanks under footways	2
To repair gasoline tank under footway	1
To remove gasoline tanks under footways	2
To place tan bark or sawdust	1
To construct and repair covered gutters across footways	38
To place covers over street gutters	12
Miscellaneous	53
Total	8,057

*This includes drains for closets and plumbing fixtures, surface water, manholes and street railway tracks; in fact, all drains which connect with city sewers or private drains.

Moneys Received by the City Engineer's Department During the Year 1904.

There was received in the City Engineer's Department during the year 1904, $37,239.45, which was duly forwarded to the City Register.

Receipts by months, account of private paving and inspection:

January	$4,573 95	
February	344 54	
March	959 48	
April	1,397 99	
May	1,156 41	
June	2,568 44	
July	1,365 26	
August	2,204 89	
September	5,760 49	
October	2,539 97	
November	2,964 35	
December	3,135 72	
		$28,971 49

Credited to Revenue account, as follows:

Received from sale of old materials	*2,359 36
" " " " dump tickets, in Burnt District	4,290 00
" " " " dumping privileges in Burnt District	299 00
" " " " old material in Burnt District	1,214 50
" " " " new brick	5 10
" " rental of crusher	100 00
Total	$37,239 45

* Comparison with other years for sale of old material:

Year of 1900	$1,214 72
" " 1901	1,696 00
" " 1902	533 00
" " 1903	1,591 55
" " 1904	2,359 36

FINANCIAL STATEMENT.

The City Council made the following appropriations provided for in the Tax Levy of 1904.

	Appropiation.	Received from Contingent Fund and Other Sources.	Balance Carried Forward from 1903.	Total Available.	Total Expended.	Balances Dec. 31, 1904.	Balances Available for 1905.
Repairs of roads, streets, etc	$180,450 00	$ 60 29		$180,510 29	$180,510 29		
Repairs of sewers	24,100 00	1 67	$860 41	24,962 08	22,998 59	$ 1,963 49	
Maintenance of bridges and culverts	40,000 00	10 00	293 42	40,303 42	40,303 42		
Paving and repairing Cross streets	30,000 00	9 19		30,009 19	18,000 00	12,009 19	
Footway crossings	6,000 00		254 21	6,254 21	6,254 21		
Livery and transportation	1,200 00			1,200 00	1,200 00		
Incidentals	500 00	599 38		1,099 38	1,099 38		
Maintenance of property yard	1,500 00			1,500 00	1,499 31	69	
Advertising	1,000 00			1,000 00	583 97	416 03	
Improvements in and additions to drainage system	5,000 00			5,000 00	5,000 00		
Paving in front of city property	20,200 00		750 06	20,950 06	11,416 40	9,533 66	
Salaries	30,458 34			30,458 34	30,456 34	2 00	
Sundry sewers	41,400 00			41,400 00	37 987 95	3,412 05	
Carrollton avenue and Franklin street sewer	3,500 00			3,500 00	3,168 15	331 85	
Laurens street and Patterson avenue sewer	8,000 00			8,000 00	8,000 00		
Edmondson avenue and Woodyear street sewer	3,332 00	5 00		3,337 00	3,190 51	146 49	
Paving McComas s reet	13,800 00			13,800 00	9,713 25	4,086 75	
West Lanvale street sewer	604 00			604 00			$ 604 00
Grading, paving, &c., "Burnt District Fund"	200,000 00	53 62		200,053 62	62 908 88		137,144 74
Emergency fire fund	23,051 55			23,051 55	23,051 55		
Totals	$634,095 89	$739 15	$2,158 10	$636,993 14	$467,342 20	$31,902 20	$137,748 74

Report of Telephone, Telegraph, Electric Light and other Poles belonging to the Various Companies Standing in the City of Baltimore by Actual Count, December 31, 1904.

United Electric Light and Power Company	2,982
Chesapeake and Potomac Telephone Company	2,599
Maryland Telephone and Telegraph Company	1,851
Western Union Telegraph Company	438
Postal Cable Telegraph Company	142
Baltimore and Ohio Railroad Company (Elect. Department)	131
Baltimore and Ohio Railroad Company (Telegraph Dept.)	57
American Telegraph and Telephone Company	64
Philadelphia, Baltimore and Washington R. R. Company	41
Northern Central Railway Company	12
United Railways and Electric Company	164
Total poles subject to city tax	8,481
Police and Fire Alarm Poles	2,372
	10,853
Owners unknown	397
Total Poles Standing in Public Streets, etc	11,250

Report Showing Amount and Character of Private Drain Pipes Laid and Class of Buildings Drained During the Year Ended December 31, 1904.

TERRA COTTA PIPES.

Diameter of Pipe.	Linear Feet.
4 inch	2029.10
5 "	2595.2
6 "	11789.6
8 "	11735.0
10 "	5447.0
12 "	2546.0
15 "	2093.0
20 "	200.0
Total	38435.6

CAST IRON PIPES.

4 inch	2136.0
5 "	1418.6
6 "	1116 6
8 "	294.0
10 "	60.0
12 "	27.6
Total	5052.6

RECAPITULATION.

Terra cotta pipes	38.435 6 lin. feet
Cast iron pipes	5052.6 lin. feet
Total	43 488.0 or 8.24 miles.

CLASS OF BUILDINGS DRAINED.

Dwellings	857
Hospitals	1
Apartment houses	16
Hotels	6
Public halls	7
Churches	7
Factories	59
Warehouses	169
Stables	3
Public schools	6
Engine houses	3
Saloons	27
Total buildings drained	1,161
Connections made to city sewers	26
Connections made to city docks	8
	34

Comparison.	1903.	1904.
Terra cotta pipes laid / Cast iron pipes laid	5.80 miles.	8.24 miles.
Buildings drained	889	1,161

NEW CONDUITS LAID AND OLD CONDUITS REMOVED BY THE CHESAPEAKE AND POTOMAC TELEPHONE COMPANY DURING THE YEAR ENDED DECEMBER 31, 1904.

When Laid.	Linear Feet.
January	62.5
February	167.0
March	863.5
April	5978.4
May	5132.5
June	1341.10
July	920.0
August	1674.9
September	1891.7
October	1801.8
November	752 5
December	561.6
Total linear feet laid	21147.4

OLD CONDUITS REMOVED.

July	119.0
October	278.0
November	35.0
December	250.0
Total linear feet removed	682.0

Conduits laid	21147 ft. 4 in
Conduits removed	682 ft. 0 in
Net increase	20465 ft. 4 in

Work Done by the United Railways and Electric Company, Under Permits, During the Year Ended December 31, 1904.

Permit No.	Location of Work
28,188	To renew rails at Howard and Franklin streets.
28,226	To renew rails at Baltimore and Liberty streets.
28,527	To renew rails at Conway and Charles streets.
	renew rails at Howard and Fayette streets.
	renew rails at Linden and North avenues.
29,280	To renew special work at Lombard and Howard streets.
29,941	To renew rails on Gay street north of Lexington street.
30,706	To renew rails at Calvert and Preston streets.
30,707	To renew curve at Aisquith and Orleans streets.
	renew curve at Howard and Lexington streets.
31,262	To renew special work at Madison avenue and Whitelock street.
31,604	To renew crossing at Charles and Preston streets.
	renew crossing at Howard and Saratoga streets.
31,933	To renew crossings at Gay and Washington streets.
	renew crossings at Patterson Park and Eastern avenues.
32,049	To renew rails on Charles street, from Barre street to Fort avenue.
	Fort avenue, from Charles street to Fort McHenry.
32,884	To renew rails on Pratt street, between Commerce street and Jones' Falls.
32,889	To renew crossings at Edmondson and Carrollton avenues.
	renew crossings at Broadway and Aliceanna street.
	renew crossings at Broadway and Canton avenue.
	renew crossings at Pratt and Eutaw streets.
33,351	To renew rails on Howard and Richmond streets.
33,547	To relay track with 9-inch rails on Fayette street, between Charles and Paca streets.
34,034	To renew crossings at Lombard and High streets.
	renew crossings at Lombard and Albemarle streets
	renew crossings at Light and Wells streets.
	renew crossings at Caroline street and Eastern avenue.
	renew crossings at Orleans street east of Aisquith street.
	renew crossings at McMechen street west of Mt. Royal avenue.
33,572	To renew curve at Biddle and Bolton streets.
	renew curve at Bolton and Preston streets.
33,781	To renew rails at Greenmount and North avenues.
	renew rails at Broadway and Shakespeare street.
	renew rails at Caroline street and Eastern avenue.
34,125	To renew rails on Pratt street between Exeter and Bond streets. (Work not completed.)

GUTTERS REMODELED.

Permit No.	LOCATION OF WORK.
28,184	To construct pipe drain west side of Howard street, from north side of Franklin street to south of Franklin street.
29,438	To remodel gutter southwest corner Howard and Lombard streets.
34,033	To construct pipe drain northwest corner of Broadway and Shakespeare streets.
28,527	To remodel gutter north side of North avenue across Linden avenue.
33,351	Remodeled gutter south side Richmond street crossing Howard street.
	Cable slot removed on Fayette and other streets 6700.0 linear feet, 1.25 miles.

WORK DONE BY THE BALTIMORE AND OHIO RAILROAD COMPANY. UNDER ORDINANCES AND PERMITS, DURING THE YEAR ENDED DECEMBER 31, 1904.

Permit No.	LOCATION OF WORK.
29,229	To construct switch on President street. Under Ordinance No. 80, approved May 21, 1904.
29,230	To construct siding on the southwest side of Alluvion street. Under Ordinance No. 81, approved May 21, 1904,
29,965	To construct six curves on McHenry street, on Poppleton street and on Parkin street. Under Ordinance No. 105, approved June 20, 1904.
33,190	To construct switch on West Pratt street, west of Greene street. Under Ordinance No. 124, approved June 29, 1904.

WORK DONE UNDER PERMITS.

27,514	To construct a spur track on Eutaw street South of Stockholm street.
31,629	To change siding on Eutaw street north of Lee street, to new location at Montgomery street and Eutaw street.
31,702	To renew rails on Hamburg street and Ohio avenue.
31,825	To change location of rails on Barre street and Ohio avenue.
32,137	To renew rails on Ohio avenue across Cross street.
32,364	To change tracks on Hamburg street and Ohio avenue.
32,782	To relay rails on Patterson street south of Pratt street.
32,969	To rearrange tracks on Fell street southeast of Wolfe street.
33,430	To renew rails on Pratt street and Commerce street.
33,480	To renew rails on Pratt street, between Howard street and Eutaw street.
33,572	To renew crossing at Ridgely and Ostend streets.
33,348	To renew curves at Pratt and Mills streets.
	renew curves at Pratt and South streets (not completed).

Work Done by the Northern Central Railway Company. Under Ordinances and Permits, During the Year Ended December 31, 1904.

LOCATION OF WORK.

Permit No.

26,927 To construct switches on Thames street. Under Ordinance No. 39, approved January 11, 1904.

30,017 To construct siding on Eastern avenue east of Eden street. Under Ordinance No. 120, approved June 20, 1904.

Work Done by the Philadelphia, Baltimore and Washington Railroad Company, Under Ordinances and Permits.

31,198 To construct switch on Boston street. Under Ordinance No. 134, approved August 15, 1904.

Work Done by the Western Maryland Railroad Company.

Laid new 5-in T rail across Front street east side of Buren street.

Work Done by the Baltimore Refrigerating and Heating Company. (Under Ordinance No. 18, Approved December 12, 1901,) During the Year ended December 31, 1904.

	Lin. Feet.
Steam pipes laid for heating purposes	2661.75
Service pipe connections	3515.94
Total	6177.69
Refrigerating pipe laid	1480.83
Service pipe connections	51.33
Total	1532.16

ARTESIAN WELL PIPES AND CONNECTIONS.

Main pipe	245.00
Connections to main line	105.50
Total	350.50

RECAPITULATION.

Pipes laid for heating purposes	6177.69	lin. feet,
Pipes laid for refrigerating purposes	1532.16	"
Pipes laid for artesian wells purposes	350.50	"
Total	8060.35	" or 1.52 miles.

CONTRACTS IN FORCE IN THE CITY ENGINEER'S DEPARTMENT, DECEMBER 31, 1904.

No.	Contractor.	To Furnish.	For.	Prices.	Expires (Including Guaranties).
534	John L. Robertson.	Grading, paving, etc.	Eager street, from Chester street to Collington ave.	For grading, 19c. per cu. yd.; for Belgian block paving, including gutterstones, and a bed of sand 12 inches thick, $1.69 per sq. yd.; new flagstones set, 34c. per sq. ft.....	June 6, 1905.
559½	Samuel Posner and W. W. Frederick.	Tunnel.	Clay street.	Special bond of $500 to cover Board of Estimates charges.	
560½	Maryland Biscuit Co.	Drainpipe.	Charles street.	Special bond of $500 to cover Board of Estimates charges.	
615	Maryland Pavement Company.	Paving.	Eutaw Place, from North avenue to Whitelock st.	Asphalt block paving, including grading, 4-inch concrete base, ½ in. mortar bed and asphalt blocks, 3x4x12 inch, $2.35 per sq. yd; old kerb reset, including redressing where necessary, 20c. per lin. ft.; cobble repaving in cross streets, 27c. per sq. yd.; 4½-inch headers, 60c per lin. ft.; old flagstone reset, 12½c. per sq. ft	Aug. 13, 1908.

616	Maryland Pavement Company.	Paving.	Bank lane, from Charles to St. Paul streets.	Asphalt block paving, including foundation and pavement complete, $2.00 per sq. yd.; new 6-inch kerb, including circles set in place, straight kerb, $1.00 per lin ft., and circles $2.00 per lin. ft.; old 6-inch kerb and circles redressed and reset, 20c. per lin. ft.; old 6-inch kerb and circles redressed in place, 10c. per lin. ft.; new 10-inch gutters, 50c. per lin. ft.; Belgian block repaving, 3c. per sq. ft.; resetting flagstones, 12½c. per sq. ft.....	Sept. 25, 1906.
617	Maryland Pavement Company.	Paving.	Bank lane, from Calvert to St. Paul streets.	Asphalt block paving, including foundation and pavement complete, $2.00 per sq. yd.; new 6 inch kerb, including circles set in place, straight kerb, $1.00 per lin. ft. and circles $2.00 per lin. ft.; old 6-inch kerb and circles, redressed and reset, 20c. per lin. ft.; old 6-inch kerb and circles redressed in place, 10c. per lin. ft.; new 10-inch gutters, 50c. per lin. ft.; Belgian block repaving, 3c. per sq. ft.; resetting flagstones, 12½c. per sq. ft.....	Sept. 11, 1906.

No.	Contractor.	To Furnish.	For.	Prices.	Expires (Including Guaranties).
666	The Southern Asphalt Paving Company.	Paving.	Baltimore street from Grove street to Eastern City Limits.	Sheet asphalt paving, inc. 6-inch concrete base, 1½ inches of binder and 2 inches of wearing surface, $2.17 per sq. yd.; cobble repaving in cross streets, 36c. per sq. yd ; new 6-inch kerb and circles, set in place, $1.00 per lin. ft.; 4½-inch headers set, 60c. per lin. ft. Will purchase old cobble and gutterstone, ¼c. per sq. foot. Will purchase old kerbstone, 3c. per lin. ft. Extra grading, not inc. in paving, 39c. per cu. yd. Vitrified brick gutters, $2.30 per sq. yd.	Sept. 18, 1907, and Mar. 19, 1908.
668	The Southern Asphalt Paving Company.	Repairing and resurfacing sheet asphalt streets and bridge roadways.	.....	Area less than 100 sq. yds., and guaranteed for one year; concrete base, 6 inches thick, 50c. sq. yd.; binder, 1½ inches thick, 65c. sq. yd.; wearing surface, 1½ inches thick. $1.50 sq. yd.; wearing surface, 2 inches thick, $1.60 sq. yd.; area 100 sq. yds. or more, and guaranteed for 5 years; concrete base, 6 inches thick, 50c. sq. yd.; binder, 1½ inches thick, 65c. sq. yd.; wearing surface, 1½ inches thick, $1.60 sq. yd ; wearing surface, 2 inches thick, $1.70 sq. yd.	Dec. 31, 1906, (See Plats).

669	Filbert Paving and Construction Co.	Paving.	St. Paul street, from 25th to 30th streets.	Sheet asphalt paving, inc. grading, 6-inch concrete base, 1½ inches of binder and 2 inches of wearing surface, $2.18 sq yd.; vitrified brick paving, inc. grading, 6-inch concrete base and sand cushion (wire cut brick), $2.19 sq. yd.; new 6-inch kerb and circles, set in place $1.13 lin. ft.; old kerb and circles redressed and reset, 17c. lin. ft.; old kerb and circles, redressed in place, 17c. lin. ft ; old kerb in cross streets, reset and rejointed, 15c. lin. ft.; 4½ inch headers, set, 60c. lin. ft.; new cobble paving in cross streets, 7c. sq. ft.; cobble repaving in cross streets, 5c. sq ft ; will purchase old cobble and gutterstone for 8c. sq. yd.; will purchase old kerbstone for 10c. lin. ft.; will purchase old flagstone for 5c. sq. ft.	Dec. 30, 1906.
674	Schneider & Co.	Paving.	Chesapeake st., from Fairmount ave. to Fayette street.	Vitrified brick paving, inc. grading (fill) 8-inch sand and gravel base, $1.45 sq. yd. New 5-inch kerb and circles, set in place, 70c. lin. ft. Extra grading, not inc. in paving, 18c. sq. yd.....	Aug. 23, 1907.
676	John L. Robertson.	Paving footways.	St. Paul street bridge.	10¼c. per sq. ft. cement pavement, inc. removal old material and cleaning up.....	Sep. 26, 1906.

CONTRACTS IN FORCE IN THE CITY ENGINEER'S DEPARTMENT, DECEMBER 31, 1904.

No.	Contractor.	To Furnish.	For.	Prices.	Expires (Including Guaranties).
678	Central Real Estate and Trust Co., and Jno. S Moke.	Paving.	St. Paul st , from 30th to 31st st.	Private contract; work guaranteed ..	Nov. 12, 1906.
680	The Maryland Pavement Company.	Paving.	Bayard street from Columbia avenue to Herkimer street.	Asphalt blocks, laying and grouting same, 4 inch concrete and ½ inch mortar bed, $2.30; grading, 20c.; total, $2.50 sq. yd. Belgian block repaving in cross streets, 30c. sq. yd. New 5-inch kerb and circles, set in place, 75c. lin. ft. Old kerb and circles redressed and reset, 20c. lin. ft. Old kerb and circles redressed in place, 10c. lin. ft. Four and one-half inch headers, set, 65c. lin. ft. Old flagstone, reset, 15c. sq. ft. Extra grading, not included in paving, 25c. cu. yd.....	July 26, 1907.
681	The United Railways and Electric Company.	Paving.	Twenty-fifth st., from Maryland ave. to Charles street.	Private contract; work guaranteed...	Oct. 26, 1906.

683	Filbert Paving and Construction Co.	Paving.	Maryland avenue, from 25th to 29th streets.	Belgian block paving, including 2,750 cu. yds. of grading, and 10-inch gutterstone, $1.90 sq. yard. Belgian block repaving in cross streets, 97c. sq. yd. New 4½-inch kerb and circles, 72c. lin. ft. Old kerb and circles redressed and reset, 22c. lin. ft. Old kerb and circles redressed in place, 10c. lin. ft. New flagstones set, 37c sq. ft. Will purchase old cobble and gutterstone, ¼ of 1c. sq. ft. Will purchase old kerbstone, 4c. lin ft. Extra grading, not included in paving, 20c. cu. yd.....	June 12, 1907.
686	Maryland and Pennsylvania R. R. Co.	Bridge.	Remington ave.	Maintenance by R. R. Co.....	Perpetual.
687	F. D. Pullen & Co	Post on footway.	West side Eutaw st, 12 feet north of Wayne st.	Special bond of indemnity.....	25 years from Oct. 28, 1901, or on removal of post.
697	Filbert Paving and Construction Co.	Repairing and resurfacing sheet asphalt streets and bridge roadways.	....	Area less than 100 sq. yds., guarantee 1 year; concrete base, 6 inches thick, 50c. sq. yd.; binder, 1½ inches thick, 63c. sq. yd.. wearing surface, 1½ inches thick, $1.55 sq. yd.; wearing surface, 2 inches thick, $1.63 sq. yd. Area more than 100 sq. yds., guarantee 5 years, concrete base, 6 inches thick, 50c. sq. yd.; binder, 1½ inches thick, 63c. sq. yd.; wearing surface, 1½ inches thick, $1.63 sq. yd.; wearing surface, 2 inches thick, $1.71 sq. yd.....	Dec. 31, 1907. (See plats).

No.	Contractor.	To Furnish.	For.	Prices.	Expires (Including Guaranties).
726	Filbert Paving and Construction Co.	Paving.	Hanover st., from Fort avenue to Winder st.	Belgian blockpaving, including 9-inch base and 10-inch gutterstone, $2.08 per sq yd.; cobblestone repaving in cross streets, 30c. per sq. yd, new 5-inch kerb and circles set, 99c. per lin. ft.; old kerb and circles redressed and reset, 18c. per lin. ft.; old kerb and circles redressed in place, 22c. per lin. ft.; new flagstones set, 34c. per sq. ft. Will purchase old cobble and gutterstone at ¼c. per sq. ft., old kerbstone at 5c. per lin. ft., and old flagstones at 2c. per sq. ft. Old flagstones redressed and reset, 7c. per sq ft.....	Sept, 29, 1907.
728	The Maryland Pavement Co.	Paving.	Ashland avenue, from Patterson Park avenue to Chester st.	Asphalt blocks, inc. grading, 4-inch concrete and ½-inch mortar base, $2.35 per sq. yd.; cobble paving in cross streets, 27c. per sq. yd.; cobble repaving in cross streets, 27c. per sq. yd.; new 5-inch kerb and circles, set, $1.00 per lin. ft.; old kerb and circles redressed and reset 25c. per lin. ft.; old kerb and circles redressed in place, 15c. per lin ft. 4½-inch headers, set, 75c. per lin. ft.; extra grading, not included in paving, 25c. per cu. yd.....	Sept. 9, 1908.

729	John L. Robertson.	Paving.	Warren ave., for 1,380 feet east of Light st.	Asphalt block paving, inc. grading, 4-inch concrete base, $2.27 per sq. yd.; cobble repaving in cross streets, 36c. per sq. yd.; new 5-inch kerb and circles set, $1.00 per lin. ft.; old kerb and circles redressed and reset, 4½-inch, 28c. per lin. ft.; old kerb and circles redressed in place, 18c. per lin. ft.; 4½-inch headers, set, 75c. per lin. ft. Will purchase old gutter and cobblestone at 1c. per sq. ft.....	July 25, 1908.
730	John L. Robertson.	Paving.	North ave., from Broadway to Greenmount ave.	Asphalt block paving, inc. grading, 6 inch concrete base, $2.42 per sq. yd.; cobble paving in cross streets, 63c. per sq. yd.; cobble repaving in cross streets, 36c. per sq. yd.; new 5 inch kerb and circles, set, $1.00 per lin. ft.; old kerb and circles redressed and reset, 28c. per lin. ft.; old kerb and circles redressed in place, 18c. per lin. ft.; new 4½-inch headers, set, 75c. per lin. ft.; old kerb reset for headers, 15c. per lin. ft. Will purchase old kerbstone at 15c. per lin. ft., old flagstone at 10c. per sq. ft., and old cobble and gutterstone at 1c. per sq. ft.....	April 22, 1908.

No.	Contractor.	To Furnish.	For.	Prices.	Expires (Including Guaranties).
731	John L. Robertson.	Paving.	McCulloh street, from Lanvale street to Lafayette avenue.	Asphalt block paving, inc. grading, 4-inch concrete base, $2.25 per sq. yd.; cobble repaving in cross streets, 36c. per sq. yd.; new 5-inch kerb and circles set, $1.00 per lin. ft.; old kerb and circles redressed and reset, 28c. per lin. ft.; old kerb and circles redressed in place, 18c. per lin. ft. Will purchase old cobble and gutterstone at 1c. per sq. ft., old kerbstone at 15c. per lin. ft, and old flagstone at 10c. per sq. ft	April 29, 1908.
732	John L. Robertson.	Paving.	North avenue, for 150 feet west of Penna. avenue.	Asphalt block paving, inc. grading, 6-inch concrete, $2.39 per sq. yd.; cobble repaving in cross streets, 36c. per sq. yd.; new 5-inch kerb and circles set, $1.00 per lin. ft.; old kerb and circles redressed and reset, 28c. per lin. ft.; old kerb and circles redressed in place, 18c. per lin. ft.; 4½-inch headers, furnished and set, 75c. per lin. ft.; 10 inch standard gutterstone, 50c. per lin. ft. Will purchase old cobble and gutterstone for 1c. per sq. ft.; old kerbstone for 15c. per lin. ft., and old flagstone for 10c. per sq. ft.....	May 9, 1908.

733	John L. Robertson.	Paving.	Fulton avenue, from Pennsylvania avenue to Druid Hill avenue.	Asphalt block paving, inc. grading, 6-inch concrete, $2.39 per sq. yd.; cobble repaving in cross streets, 36c. per sq. yd.; Belgian block repaving in cross streets, 50c. per sq. yd.; new 5-inch kerb and circles set, $1.00 per lin. ft.; old kerb and circles redressed and reset, 28c. per lin. ft.; old kerb reset for headers, 15c. per lin. ft. Will purchase old cobble and gutterstone for 1c. per sq. ft., old kerbstone for 15c. per lin. ft., and old flagstone for 10c. per sq. ft.....	June 22, 1908.
736	Henry Smith & Sons	Temporary tracks.	Gay st., from Pratt st to Water st	Special indemnity bond of $50,000.....	Upon removal of tracks.
739	The Southern Asphalt Paving Company.	Paving.	St. Paul st., from North ave. to 25th st.	Sheet asphalt paving inc. grading, 6-inch sand and 6 in cobblestone base, 1½ inch binder, and 2-inch wearing surface, $2.08 per sq. yd.; vitrified brick paving, inc. grading, 6-inch sand and 6-inch cobblestone, $2.09 per sq. yd.; Belgian block paving, $2 60 per sq. yd.; Belgian block repaving, 70c. per sq. yd.; vitrified brick gutters in cross streets, $2.60 per sq. yd.; cobblestone repaving in cross streets, 40c. per sq. yd.; new 5-inch kerb and circles set in place, 90c. per lin. ft.; old kerb reset, 20c. per lin. ft.; old kerb and circles redressed and reset. 30c. per lin. ft ; old kerb and circles redressed in place, 15c. per lin. ft.; 4½-inch headers furnished and set, 60c. per lin. ft.; old kerb reset for headers, 30c. per lin. ft.....	Nov. 19, 1907.

CONTRACTS IN FORCE IN THE CITY ENGINEER'S DEPARTMENT, DECEMBER 31, 1904.

No.	Contractor.	To Furnish.	For.	Prices.	Expires (Including Guaranties).
740	The Southern Asphalt Paving Co.	Paving.	Baltimore street, from Chesapeake to Grove streets.	Sheet asphalt paving, inc. 6-inch concrete base, 1½-inch binder, 2-in wearing surface $2.25 per sq. yd.; new 6-inch kerb and circles set, $1.10 per lin. ft; old kerb and circles redressed and reset, 35c. per lin. ft; 4½ inch headers, set 65c. per lin. ft., vitrified brick gutters, $2.60 per sq. yd.....	Sept. 11, 1907.
747	U. S. Wood Preserving Co.	Paving.	Calvert st., from German to Baltimore sts.	Wooden block paving, 6-inch concrete base, $3.50 per sq. yd.; Belgian block repaving in cross streets, 25c. per sq. yd.; old kerb and circles redressed and reset, 50c. per lin. ft; old kerb and circles, redressed in place 30c. per lin ft.; reset Belgian blocks on 6-inch concrete for headers, $1.50 per sq. yd. Will purchase Belgian blocks and gutterstone at 2c. per sq. ft., and old flagstone at 1½c. per sq. ft.....	April 23, 1908.

751	Dan'l Sullivan.	Paving.	Brunt st., from Bloom to Baker street.	Cobblestone, inc. gutters, $1.09 per sq. yd.; cobblestone paving in cross streets, $1.00 per sq. yd.; cobblestone repaving 49c. per sq. yd.; new 5-inch kerb and circles, set, 90c. per lin. ft.; new 4½-inch kerb and circles, set, 80c. per lin. foot for straight and $1.50 per lin. foot for circular; old kerb and circles, redressed and reset, 15c. per lin. ft.; old kerb and circles reset, 15c. per lin. ft.; new flagstones, set, 30c. per sq. ft. Extra grading not included in paving, 30c. per cu. yd.....	June 16, 1905.
752	Wm. M. Elder.	Paving.	Montford avenue, from Townsend street to Gay.	Cobble paving, inc. grading, 94c. per sq. yd.; cobble repaving in cross streets, 36c. per sq. yd.; new 4½-inch kerb and circles, set, 65c. per lin. ft. for straight and $1.30 per lin. ft. for circular; old kerb and circles redressed and reset, 29c. per lin. ft.; new flagstones, set, 32c. per sq. ft. Extra grading, not inc. in paving, 30c. per cu. yd. Will purchase old cobble and gutterstones for 1c. per sq. ft., and old kerbstone for 10c. per lin. ft.....	May 23, 1905.
754	Ferguson & McCullough.	Paving.	Rose street, from Fairmount ave. to Fayette st.	New cobble paving, inc. grading and guttering, $1.02 per sq. yd.; cobble repaving, 27c. per sq. yd.; new 4½-inch kerb, set, 69c. per lin. ft.; 4½-inch kerb, reset and redressed, 35c. per lin. ft.; 4½-inch kerb, reset, 10c. per lin. ft.; new flagstones, set, 33c. per. sq. ft.; flagstones, reset, 5c. per sq. ft	June 3, 1905.

No.	Contractor.	To Furnish.	For.	Prices.	Expires (Including Guaranties).
755	Wm. M. Elder.	Paving.	Carey street, from Columbia avenue to Ward street.	New cobble paving, inc. grading, 88c. per sq. yd.; cobble repaving, 36c. per sq. yd.; 4½-inch new kerb (gneiss), set, 65c. per lin. ft ; circles $1.30 per lin. ft.; 4½-inch kerb, reset and redressed, 30c. per lin. ft.; 4½-inch kerb, redressed in place, 25c. per lin. ft.; Belgian block repaving, 12c. per sq. yd., vitrified brick repaving, 12c. per sq. ft.; new flagstones, set, 32c. per sq. ft.; flagstones, reset, 4c. per sq. ft.	June 17, 1905.
756	Leopold Pfefferkorn.	Post on footway.	412 S. Eutaw st.	Special bond of indemnity.....	25 years, from Sept. 18, '02, or on removal of post.
757	Filbert Paving and Construction Co.	Paving.	Henry street, from Warren avenue to Hamburg street.	Belgian block paving inc. grading, $2.30 per sq. yd.; cobble repaving in cross streets, 35c. per sq. yd., new 4½-inch kerb set, 75c. per lin. ft. old kerb and circles redressed and reset, 30c. per lin. ft.; old kerb and circles redressed in place, 20c. per lin. ft.; new flagstones set, 35c. per sq. ft.; flagstones reset, 9c. per sq. foot.....	Five years after acceptance.

764	Daniel Sullivan.	Paving.	Northwest street, from Fulton av. to Payson st.	Vitrified brick paving, inc. grading, $1.97 per sq. yd.; cobblestone paving in cross streets, 80c. per sq. yd.; vitrified brick repaving in cross streets, 50c. per sq. yd.; new 4½-inch kerb and circles set, 65c. per lin. ft.; old kerb and circles redressed and reset, 18c. per lin. ft.; old kerb and circles redressed in place, 10c. per lin. ft.; 4½-inch headers set, 45c. per lin. ft.; extra grading, not inc. in paving, 33c.; per cu. yd.; cobblestone repaving in cross streets, 40c. per sq. ft. Will purchase old cobble and gutterstone for 2c. per sq. ft. and old kerbstone for 10c per lin. ft.....	Five years after acceptance.
766	M. Luther Wright.	Setting kerb.	N. W. cor. Dark lane and Calvert st.	Private contract; work guaranteed.	Jan. 14, 1905.
767	Filbert Paving and Construction Co.	Paving.	Hoffman st from Broadway to Bond st.	Vitrified brick paving, inc. grading, 4-inch concrete base, $2.18 per sq. yd.; cobble paving in cross streets, 35c. per sq. yd.; new 4½-inch kerb and circles set in place, 75c. per lin. ft.; old kerb reset, 15c. per lin. ft.; old kerb and circles reset, 15c. per lin. ft.; extra grading not inc. in paving, 35c. per cu. yd.....	Oct. 14, 1908.
776	Patrick Keelty.	Paving.	Fayette street, from Luzerne to Patapsco sts.	Cobblestone paving, inc. grading and gutterstone, 95c. per sq. yd.; cobblestone repaving in cross streets, 45c. per sq. yd.; new 4½-inch kerb and circles set in place	

No.	Contractor.	To Furnish.	For.	Prices.	Expires (Including Guaranties).
				75c. per lin. ft.; new flagstones set, inc. blocks, 35c. per sq. ft.; old flagstones reset, 5c. per sq. ft.; 4½-inch kerb reset and redressed, 25c. per lin. ft.....	Nov. 20, 1905.
781	Filbert Paving and Construction Co.	Repairing and resurfacing sheet asphalt streets and bridge roadways.	.....	Area less than 100 sq. yds., guaranteed one year, concrete base 6 inches thick, 50c. per sq. yd.; binder 1½ inches thick, 67c. per sq. yd.; wearing surface 1½ inches thick, $1.61 per sq. yd.; wearing surface 2 inches thick, $1.69 per sq yd. Area more than 100 sq. yds., guaranteed five years, concrete base 6 inches thick, 50c. per sq. yd.; binder 1½ inches thick, 67c per sq. yd.; wearing surface 1½ inches thick, $1.69 per sq. yd.; wearing surface 2 inches thick, $1.77 per sq. yd.....	Dec. 31, 1908. (See plats).
793	Pat'k Reddington.	Paving.	Stockholm st., from Carroll st. to Wicomico st.	New cobble paving, inc. earthwork, 87c. per sq. yd ; cobble repaving, 36c. per sq. yd.; new 4½-inch kerb set, 74c. per lin. ft.; 4½inch kerb reset and redressed, 25c. per lin ft.; extra grading not inc. in paving, 35c. per cu. yd.....	Two years after acceptance.

796	Filbert Paving & Construction Co.	Setting kerb.	S. W. Cor. North ave. and 10th st.	Private contract; work guaranteed.....	April 13, 1905.
799	Theodore Hooper.	Setting kerb.	S. S. Roland av., east of Third av.	Private contract; work guaranteed.....	May 7, 1905.
802	Edw. J. Gallagher.	Setting kerb.	N. S. Fairmount ave., bet. Kenwood ave. and Grove st.	Private contract; work guaranteed.....	June 9, 1905.
804	C. E. Spalding.	Setting kerb.	Walbrook av., W. of Fulton av.	Private contract; work guaranteed.....	July 27, 1905.
805	C. E. Spalding.	Paving.	Walbrook av., from Fulton av. to Monroe st.	Private contract; work guaranteed.....	Sept. 17, 1905.
806	Patrick Reddington	Paving,	Chase st., from Patterson Park av. to Milton av.	New cobble paving, inc. earthwork, $1.05 per sq. yd.; cobble repaving, 54c. per sq. yd.; new 4½-inch kerb and circles 75c. per lin. ft. set; 4½-inch kerb, reset and redressed, 30c. per lin. ft.; 4½-inch kerb, redressed in place, 25c. per lin. ft.; vitrified brick repaving, 60c. per sq. yd.; extra grading, not inc. paving, 30c. per cu. yd.; new flagstones, set, 45c. per sq. ft.; flagstones, reset, 10c. per sq. ft.; cobble repaving, in cross streets, 36c. per sq. yd.....	Oct. 6, 1906.

CONTRACTS IN FORCE IN THE CITY ENGINEER'S DEPARTMENT, DECEMBER 31, 1904.

No.	Contractor.	To Furnish.	For	Prices.	Expires (Including Guaranties).
807	Chas. A. Hook, Jr.	Paving.	Elghth st., from North ave. to Walbrook ave.	Macadam pavement, 6 inches thick, including grading, 49c. per sq yd.; vitrified brick gutters with cobble rebuts, 85c. per sq. yd.; flagstone crossings, 42c. per sq. yd.; extra grading not included in paving, 39c. per sq. yd.....	Two years after acceptance.
808	Chas. A. Hook, Jr.	Paving.	Tenth st., from Windsor Mill road to Chesapeake ave.	Macadam pavement, 6 inches thick, including grading, 45c. per sq. yd ; vitrified brick gutters with coble rebuts, 85c. per sq. yd.; vitrified brick gutters with cobble rebuts repaved, 60c. per sq. yd.; new flagstone crossings, 42c. per sq. yd.; old flagstones reset, 12c. per sq. ft.; extra grading not included in paving, 30c. per cu. yd.....	Two years after acceptance.
809	Chas. A. Hook, Jr.	Paving.	Twelfth st., for 175 ft. n. from n. e. side of Windsor Mill road.	Macadam pavement, 6 inches thick, including grading, 46c. per sq. yd.; vitrified brick gutters with cobble rebuts, 85c. per sq. yd.; flagstone crossings, 42c. per sq. ft.; extra grading not included in paving, 40c. per cu. yd	July 1, 1906.

810	Chas. A. Hook, Jr.	Paving.	Clifton ave., from Tenth st. to Chelsea Terrace.	Macadam pavement, 6 inches thick, inc. grading, 49c. per sq. yd.; vitrified brick gutters with cobble rebuts, 85c. per sq. yd.; vitrified brick gutters, with cobble rebuts, repaved, 60c. per sq. yd.; flagstone crossings, 42c. per sq. ft.; old flagstones reset, 12c. per sq. ft.; extra grading not inc. in paving, 34c. per cu. yd	Two years after acceptance.
817	Maryland Paving Co	Asphalt blocks.	General purposes.	Size 3x4x12 in., 5¼c.; size 3x5x12 in., 6c.; size 4x4x12 in.. 6c.; size 4x5x12 in., 6½c	Dec. 31, 1904.
818	Patrick Keelty.	Sand.	General purposes.	Screened sand: District No. 1, $1.00 per cu. yd.; District No. 2, 98c. per cu. yd.; District No. 3, 85c. per cu. yd. Paving sand: District No. 1, 83c. per cu. yd.; District No. 2, 83c. per cu. yd	Dec. 31, 1904.
819	The Schwind Quarry Co.	Building stone.	General purposes.	District No. 1, $1.75 per cu. yd.; District No. 2, $1.75 per cu. yd.; District No. 3, $1.75 per cu. yd.; District No. 4, $2.00 per cu. yd.; District No. 5, $2.00 per cu. yd	Dec. 31, 1904.
820	The Schwind Quarry Co.	Gutterstone.	General purposes.	Standard 10-in., 30c. per lin. ft	Dec. 31, 1904.
821	The Schwind Quarry Co.	Cobble or rubble, and broken stone.	General purposes.	Cobble or rubble stone, in District No. 1, $1.85 per perch; gneiss broken stone, Nos. 1 and 2, in District No. 1, $1.55 per cu. yd., in District No. 3, $1.69 per cu. yd; gneiss broken stone, No. 3, in District No. 1, $1.80 per cu. yd. in District No. 3, $1.69 per cu. yd.	Dec. 31, 1904.

No.	Contractor.	To Furnish.	For.	Prices.	Expires (Including Guaranties).
822	Chas. A. Hook, Jr.	Broken stone	General purposes.	Gabbro or nigger-head stone, Nos. 1, 2 and 3, in Districts 1, 2, 3 and 4, $2.20 per cu. yd.; gabbro or nigger-head screenings in Districts 1, 2, 3 and 4, $2.20 per cu. yd.....	Dec. 31, 1904.
823	Champion Brick Co.	Brick.	General purposes.	No. 2 arch paving or paving, $9.00 per M	Dec. 31, 1904.
824	Filbert Paving and Construction Co.	Repairing and resurfacing sheet asphalt streets and bridge roadways.	General purposes.	Areas less than 100 sq. yds., guaranteed 1 year; concrete base, 6 inches thick, 50c. per sq. yd.; binder, 1½ inches thick, 65c per sq. yd.; wearing surface, 1½ inches thick, $1.61 per sq. yd.; wearing surface, 2 inches thick, $1.67 per sq. yd.; areas more than 100 sq. yds.; guaranteed 5 years; concrete base, 6 inches thick, 50c. per sq. yd.; binder, 1½ inches thick, 65c. per sq. yd.; wearing surface, 1½ inches thick, $1.69 per sq. yd.; wearing surface, 2 inches thick, $1 77 per sq. yd.; Slag block paving, $4.05 per sq. yd.; Slag block repaving, $2.30 per sq. yd.....	(See plats for dates of guaranties expiration).
825	Filbert Paving and Construction Co.	Sand.	General purposes.	Screened sand, in District No. 4, 83¾c. per cu. yd.....	Dec. 31, 1904.

826	Wm. T. Hoffman.	Sand.	General purposes.	Screened sand, in District No. 5, 82½c. per cu. yd.; paving sand, in District No. 5, 82½c. per cu. yd.....	Dec. 31, 1904.
827	National Building Supply Co.	Cement.	General purposes.	"Atlas" brand, domestic Portland, 46c. per bag; discount 2 per cent. in 10 days; rebate 10c. per bag.....	Dec. 31, 1904.
828	National Building Supply Co.	Vitrified sewer pipe.	General purposes	27 inches, double strength, per lin. ft., $2.04 net for general delivery and delivery at City Yard; $1.99-75 net for railroad delivery. 24 inches, double strength, per lin. ft., $1.30 net for general delivery and delivery at City Yard; $1.26-75 net for railroad delivery. 18 inches, double strength, per lin. ft., 68c. net for general delivery and delivery at City Yard; $66\frac{3}{19}$c. net for railroad delivery. 12 inches, double strength, per lin. ft., 31c. net for general delivery and delivery at City Yard; 30c. net for railroad delivery. 27 inches, single strength, per lin. ft., $1.78 5 net for general delivery and delivery at City Yard; $1.74-25 net for railroad delivery. 24 inches, single strength, per lin. ft., $1.00-75 net for general delivery and delivery at City Yard; 97-5c. net for railroad delivery. 18 inches, single strength, per lin. ft., $52\frac{7}{19}$c net for general delivery and delivery at City Yard; 51c. net for railroad delivery. 12 inches, single strength, per lin. ft., 31c. net for general delivery and delivery at City Yard; 30c. net for railroad delivery. Discount, 2 per cent. for cash in 15 days	Dec. 31, 1904.

CONTRACTS IN FORCE IN THE CITY ENGINEER'S DEPARTMENT, DECEMBER 31, 1904.

No.	Contractor.	To Furnish.	For.	Prices.	Expires (Including Guaranties).
829	D. A. Leonard.	Cobble or rubble and broken stone	General purposes.	Cobble or rubble stone, in District No. 2, $1.89 per perch; in District No. 5, $1.99 per perch; gneiss screenings, in District No. 3, 90c. per cu. yd.	Dec. 31, 1904.
830	P. M. Womble.	Lumber.	General purposes.	White pine shelving, 1x12 inches, and 12 to 16 ft, $40 per M ft.; white pine selects, 2x12 in., and 12 to 16 ft., $80 per M ft.; Virginia pine, mcht. qual., all sizes, $16 per M ft.; Virginia pine stock culls, 1x12 and 2x12 in., and 12x16 ft., $17.50 per M ft.; North Carolina pine stock culls, 1x12 and 2x12 in., and 12 to 16 ft., $17.50 per M ft.	Dec. 31, 1904.
831	J. H. Atkinson.	Gutter and flagstones.	General purposes.	10-in hammer-dressed gutterstones, 25c. per lin. ft.; flagstones inc. 3 rows of blocks, 30c. per sq. ft.	Dec. 31, 1904.
832	J. H. Atkinson.	Cobble or rubble and broken stone	General purposes.	Cobble or rubble stone in Dist. No. 4, $2 per perch; gneiss broken stone, Nos. 1 and 2, in Dist. No. 4, $2 per cu. yd., No. 3 in Dist. No. 4, $2.25 per cu. yd.	Dec. 31, 1904.

833	Anna Diller.	Sand.	General purposes.	Paving sand in Dist. No. 3, 73c. per cu. yd., in Dist. No. 4, 78c. per cu. yd.	Dec. 31, 1904.
834	Baltimore Brick Co.	Brick.	General purposes.	No. 1 hand-made paving brick, $14 per M; No. 2 hand made paving brick, $12 per M; Chambers' machine made sewer brick. $6.44 per M; Martin machine made sewer brick, $7.49 per M	Dec. 31, 1904.
835	P. Flanigan & Co.	Granite paving blocks.	General purposes	$54.80 per M	Dec. 31, 1904.
836	Clearfield Clay Working Co.	Vitrified sewer brick.	General purposes.	$18.10 per M, car load lots, f. o b. Baltimore	Dec. 31, 1904.
837	Geo. M. Hay.	Vitrified sewer pipe.	General purposes.	36 inches, double strength, per lin. ft., for general delivery and delivery at City Yard, $3.99 net; for railroad delivery $3.92 net; 20 inches double strength, per lin. ft., for general delivery and delivery at City Yard, 90c. uet; for railroad delivery, .8775 net; 36 inches single strength, per lin. ft., for general delivery and delivery at City Yard, $3.64 net; for railroad delivery, $3.57 net; 20 inches single strength, per lin. ft., for general delivery and delivery at City Yard, .6975 net.; for railroad delivery, .675 2 per cent. discount for cash in 15 days	Dec. 31, 1904.

CONTRACTS IN FORCE IN THE CITY ENGINEER'S DEPARTMENT, DECEMBER 31, 1904.

No.	Contractor.	To Furnish.	For.	Prices.	Expires,(Including Guaranties).
838	W. D. Gill & Son.	Lumber.	General purposes.	Georgia pine, Savannah mcht. quality, all sizes, $24.45 per M ft.; North Carolina pine, mcht. quality, all sizes, $16.45 per M ft	Dec. 31, 1904.
839	I. H. Peddicord & Sons' Quarry and Transfer Co.	Cobble or rubble and broken stone.	General purposes.	Cobble or rubble stone, District No. 3, $1.80 per perch; gneiss broken stone, Nos. 1 and 2, $1.59 per cu. yd.; gneiss broken stone, No. 3, $1.75 per cu. yd.; gneiss dust, $1.00 per cu. yd	Dec. 31, 1904.
840	I. H. Peddicord & Sons' Quarry and Transfer Co.	Kerbstone.	General purposes.	Four and half inch kerbstones, 60c. per lin. ft.; 5 inch kerbstones, 70c. per lin. ft	Dec. 31, 1904.
841	Welch, Gloninger & Maxwell.	Vitrified paving blocks.	General purposes.	Repressed bevel edge, carload lots, f. o. b. Baltimore, $23.00 per M; wire-cut, square edge, carload lots, f. o. b. Baltimore, $21.00 per M; wire-cut, carload lots, delivered City Yard, Baltimore, $23.00 per M; repressed, carload lots, delivered City Yard, Baltimore, $25 00 per M.	Dec. 31, 1904.
842	John Bullock & Son.	Cement.	General purposes.	"Alpha" brand, domestic Portland, $1.70 per bbl.; rebate 10c. per bbl. returned	Dec. 31, 1904.

843	John L. Robertson.	Paving.	McComas st., from Hanover st. to Creek al.	Asphalt block paving, inc. grading, a 4-inch broken-stone concrete base and ½-inch mortar bed, $2.39 per sq. yd.; cobblestone repaving in cross streets, 36c. per sq. yd.; new 5-inch kerb and circles set in place, $1.06 per lin. ft.; old kerb and circles redressed and reset, 44c. per lin. ft.; old kerb and circles reset, 20c. per lin. ft.; new 4½-inch headers set, 82c. per lin. ft.; old kerb reset as headers, 26c. per lin. ft.; will purchase old cobble and gutter stone for ½c. per sq. ft.; extra grading, not inc paving, 42c. per cu. yd.; repairing cement footways, 20c per sq. ft.; repairing brick footways, 10c. per sq. ft.....	June 17, 1909.
844	John L. Robertson.	Paving.	Ducatel st., from Entaw Place to Bolton st.	Asphalt block paving, inc. grading, a 4-in. broken stone concrete base, and ½-in. mortar bed, $2.25 per sq. yd.; Belgian block paving in cross streets, $2.25 per sq. yd.; cobblestone repaving in cross streets, 36c. per sq. yd.; new 5-in. kerb and circles set in place, $1.06 per lin. ft.; old kerb and circles, redressed and reset. 44c. per lin. ft.; old kerb and circles redressed in place, 36c. per lin. ft.; old kerb and circles reset, 20c. per lin. ft.; new 4½-in. headers, set, 82c. per lin. ft., old kerb reset as headers, 26c. per lin. ft.; extra grading, not inc. paving. 47c. per cu. yd.; repairing cement footways, 20c. per sq. ft.; repairing brick footways. 10c. per sq. ft.....	Five years after acceptance.

No.	Contractor.	To Furnish.	For.	Prices.	Expires (Including Guaranties).
845	John L. Robertson.	Paving.	Payson st., from Fayette st. to Edmondson av.	Asphalt block paving, inc. shaping sub-foundation, a 4 in. broken stone concrete base and ½-in. mortar bed, $2.30 per sq. yd.; cobblestone paving in cross streets, 97c. per sq. yd ; cobblestone repaving in cross streets, 36c. per sq. yd.; vitrified brick repaving in cross streets, 35c. per sq. yd.; new 5-in. granite kerb and circles set in place, inc. 48 circles, $1.06 per lin. ft.; old kerb and circles redressed and reset, 44c. per lin. ft.; old kerb and circles redressed in place, 36c. per lin. ft.; old kerb and circles reset, 20c. per lin. ft.; new 4½-in. headers, set, 82c. per lin. ft.; old kerb reset as headers, 26c. per lin. ft.; vitrified brick gutters in cross streets, 30c. per sq. ft.; will purchase old cobble and gutterstone at ¾c. per sq. ft.; will purchase old kerbstone at 5c. per lin. ft.; will purchase old flagstones at 7c. per sq. ft.; will renew brick footways at 11c. per sq. ft.; will renew cement footways at 18c. per sq. ft...	Five years after acceptance.

846	Patrick Keelty.	Grading.	Payson st., from Fayette st. to Edmondson av.	37c. per cu. yd.....	.....
847	Balto. Terra Cotta Works.	Vitrified sewer pipe.	General purposes	30 inches double strength, per lin. ft., $2.64 net, general delivery and delivery at City Yard; $2.58-5 net, railroad delivery. 15 inches, double strength, per lin ft., 48 6/10c. net, general delivery and delivery at City yard; 47-25c. net, railroad delivery. 30 inches, single strength, per lin. ft., $2.31 net, general delivery and delivery at City Yard; $2 25-5 net, railroad delivery. 15 inches single strength, per lin. ft., 41-85c. net, general delivery and delivery at City Yard; 40 5c. net, railroad delivery. 2 per cent. discount for cash in 15 days.....	Dec. 31, 1904.
848	Gottlieb-Bauernschmidt-Straus Brewing Co.	Kerb and footway.	Clement st., side of 1400 Hull st.	Private contract; work guaranteed...	Mar. 16, 1906.
849	August Wehr and Edw. J. Gallagher.	Setting kerb.	South side Fairmount ave., from Grove to Patuxent streets.	Private contract; work guaranteed.....	April 19, 1906.
850	Chas. E. Spalding.	Paving and kerbing.	Walbrook ave., from Monroe to Payson streets.	Private contract; work guaranteed.....	June 16, 1906.

No.	Contractor.	To Furnish.	For.	Prices.	Expires (Including Guaranties).
851	Edw. J. Gallagher.	Setting kerb.	West side Patuxent street, from Baltimore street to Fairmount avenue.	Private contract; work guaranteed.....	June 15, 1906.
852	Danl. N. Sullivan.	Repaving.	Over drains.	Bills for repaving guaranteed.....	June 22, 1905
853	The U. S. Wood Preserving Co.	Treated plank	General purposes.	$55.00 per M ft., B. M.....	Dec. 31, 1904.
854	Geo. A. Fuller Co.	Repaving.	Over drains.	Bills for repaving guaranteed.	May 16, 1905.
855	Geo. A. Fuller Co.	Indemnity bond.	.....	.....	June 14, 1905.
856	Consolidated Gas Co.	Repaving.	General work.	Bills for repaving guaranteed.....	June 14, 1905.
857	Owen Patterson.	Paving.	21st street, from Oak street to Jefferson Place.	New cobble paving, inc. 252 cu. yds. excavation, 294 lin. ft gutterstones, $1.07 per sq. yd.; cobble repaving, 60c. per sq. yd.; new 4½-inch kerb and circles set, 75c. per lin. ft.; 4½-inch kerb and circles reset and redressed, old, 20c. per lin. ft.; 4½-inch kerb and circles reset, old, 20c. per lin. ft.; extra grading, not inc. in paving, 45c per cu. yd.....	Two years after acceptance.

858	Mary Moyer.	Setting kerb.	Montebello ave., N. E. cor. Belt st.	Private contract; work guaranteed...	July 13, 1906.
859	The Filbert Paving and Construction Co.	Cement footway pavements.	Calvert Street bridge.	Including removal of old material and cleaning up, 10¾c. sq. ft.....	Five years after acceptance.
860	Wm. D. Gill & Son.	Wood blocks.	General purposes.	4x4x8 inch, $52.85 per M.; 3x4x8 inch, $39.65 per M.....	Dec. 31, 1904.
861	Daniel Sullivan.	Paving.	Walbrook ave., from 9th st, to 13th st.	Macadam pavement, 6 inches thick, including grading, 71c. per sq. yd.; vitrified brick gutters, with cobble rebuts, 97c. per sq. yd.; vitrified brick gutters, with cobble rebuts, repaved, 57c. per sq. yd.; flagstone crossings, 38c. per sq. ft.; old flagstones redressed and reset, 10c. per sq. ft.; extra grading not included in paving, 40c. per cu. yd.....	Two years after acceptance.
862	J. H. Joyce.	Setting kerb.	Dover st. rear 312-316 W. Camden st..	Private contract; work guaranteed....	Aug. 11, 1906.
863	Patrick Keelty.	Grading.	Kennedy lane, from old York rd. to Cromwell st.; Cromwell st. from 22d st. to Kennedy la.; 4th ave. west from Chestnut ave.; Chestnut ave. south from 4th ave.	Excavation at Kennedy lane and Cromwell street, 32c. per cu. yd.; fill at 4th avenue and Chestnut avenue, 44c. per cu. yd.....	.....

CONTRACTS IN FORCE IN THE CITY ENGINEER'S DEPARTMENT, DECEMBER 31, 1904.

No.	Contractor.	To Furnish.	For.	Prices.	Expires (Including Guaranties).
864	P. Flanigan & Co.	Granite paving blocks.	General purposes.	Delivered on work, $62.50 per M.....	Dec. 31, 1904
865	Balttimore Contract and Wrecking Co.	Paving.	Grove st., from Fairmount ave. to Fayette st.	Vitrified brick paving, including a 4 inch broken-stone concrete base and 1-inch sand cushion, $1.90 per sq. yd.; cobble paving in cross streets, 80c. per sq. yd.; new 4½-inch kerb and circles set in place, 75c. per lin. ft.; old kerb and circles redressed and reset, 25c. per lin. ft.; old kerb and circles redressed in place, 15c. per lin. ft.; old kerb and circles reset, 20c. per lin. ft.; 10-inch open stone gutters, 30c. per lin. ft.; extra grading, not including paving, 25c. per cu. yd.; removing and renewing brick footways, 5c. per sq. ft.....	Two years after acceptance.

866	Baltimore Contract Wrecking Co.	Paving.	Patuxent street, from Baltimore st. to Fairmount avenue.	Vitrified brick paving, inc. grading, a 4-inch gravel concrete base, and 1-inch sand cushion, $2.00 per sq. yd.; vitrified brick paving along and between street railway tracks, inc. concrete base, etc., $2.10 per sq. yd.; cobblestone paving in cross streets, 80c. per sq. yd.; new 4½-inch kerb and circles set in place, $1.50 per lin. ft.; old kerb and circles redressed and reset, 30c. per lin. ft.; old kerb and circles redressed in place, 25c. per lin. ft.; old kerb and circles reset, 30c. per lin. ft.; new 4½-inch headers set, 40c. per lin. ft.; old kerb reset as headers, 20c. per lin. ft.; will purchase old cobble and gutterstone at 1c. per sq. ft.; extra grading, not inc. paving, 30c. per cu. yd.....	Five years after acceptance.
867	Glover & Kemp.	Repaving.	Over drains.	Bills for repaving guaranteed.....	Aug. 4, 1905.

CONTRACTS IN FORCE IN THE CITY ENGINEER'S DEPARTMENT, DECEMBER 31, 1904.

No.	Contractor.	To Furnish.	For.	Prices.	Expires (Including Guaranties).
868	Daniel Sullivan and John C. Leonard.	Paving.	Courtland street, from Lexington to Saratoga sts.	Wood block paving, inc. grading, a 4-inch concrete base and 1-inch sand cushion, $2.83 per sq. yd.; old kerb and circles reset, 10c. per lin. ft.; cobblestone repaving in cross streets, 55c. per sq. yd.; new 6-inch armored kerb and circles set in place, 60c. per lin. ft.; old kerb and circles redressed and reset, 20c. per lin. ft.; old kerb and circles redressed in place, 20c. per lin. ft.; 4½-inch headers set, 65c. per lin. ft ; new 4½-inch kerb, 65c. per lin. ft.; old kerb reset as headers, 15c. per. lin ft.; will purchase old cobble and gutterstone at ¼c. per sq. ft.; will purchase old kerbstone at 8c. per lin. ft.; extra grading, not inc. in paving, 55c. cu. yd.; repairs to brick footways, 6c. per sq. ft.. repairs to cement footways, 15c. per sq. ft.....	Five years after acceptance.

869	The Hook & Ford Contracting Co.	Paving.	Chesapeake ave., from 10th st. to Liberty road.	Macadam pavement, 6 inches thick, inc. grading, 70c per sq. yd.; vitrified brick gutters, with cobble rebuts, 99c. per sq. yd.; new vitrified brick gutters, with cobble rebuts repaved, 75c. per sq. yd.; old flagstones redressed and reset, 15c. per sq. ft.; 10-inch open gutterstone, 35c. per lin ft.; extra grading, not inc. in paving, 45c. per cu. yd.; vitrified brick crossings, 20c. per sq. ft.; vitrified brick gutters. without rebuts, 25c. per lin. ft	Two years after acceptance.
870	The Baltimore Contract and Wrecking Co.	Paving.	Aiken st., from North ave. to Lafayette ave.	New cobble or rubble stone pavement, inc. grading, 90c. per sq. yd.; cobble or rubble stone repaving, inc. all necessary materials, 45c. per sq. yd.; 10-inch gutterstones for new pavement, 25c. per lin. ft.; new 4½-inch kerb set, inc. circles, 75c. per lin. ft.; old kerb and circles reset, 25c. per lin. ft.; extra grading, not inc. in paving, 30c. per cu. yd.....	Two years after acceptance.

CONTRACTS IN FORCE IN THE CITY ENGINEER'S DEPARTMENT, DECEMBER 31, 1904.

No.	Contractor.	To Furnish.	For.	Contractor.	Expires,(Including Guaranties).
871	The Maryland pavement Co.	Paving.	Lamont ave., from Oliver to Ensor sts.	Asphalt block paving, inc. grading, a 4-inch broken-stone concrete base and ½-inch motar bed, $2.30 per sq. yd.; asphalt block paving along and between street railway tracks, $2.50 per sq. yd.; cobblestone repaving in cross streets, 35c. per sq. yd.; new 6-inch armored concrete kerb and circles set in place, 80c. per lin. ft.; old kerb and circles redressed and reset, 45c. per lin. ft; old kerb and circles redressed in place, 25c. per lin. ft.; old kerb and circles reset, 17c. per lin. ft.; new 4½-inch headers set, 70c. per lin. ft.; old kerb reset as headers, 29c. per lin ft.; will purchase old cobble and gutter stone at ¾c. per sq. ft.; will purchase old kerbstone at 5c. per lin. ft.; will purchase old flagstone at 5c. per sq. ft.; extra grading, not inc. paving, 50c. per cu. yd.....	Five years after acceptance.
872	Wm. Dunnett.	Repaving.	Over drains.	Bills for repaving guaranteed.....	Sept. 22, 1905.
873	W.H.Rothrock&Co.	Repaving.	Over drains.	Bills for repaving guaranteed.....	Sept. 22 1905.

874	J. W. Cooney.	Repaving.	Over drains.	Bills for repaving guaranteed.....	July 18, 1905.
875	J. W. Cooney.	Indemnity bond.	.....	.....	Sept. 28, 1905.
876	J. C. German.	Setting kerb.	N. E. cor. Huntingdon ave. and Barclay st.	Private contract; work guaranteed.....	Oct. 12, 1906.
877	Healey & Bro.	Repaving.	Over drains.	Bills for repaving guaranteed.....	Oct. 18, 1905.
878	H. C. Bowman.	Repaving.	Over drains.	Bills for repaving guaranteed.....	Dec. 9, 1905.
879	J. A. Graham.	Repaving.	Over drains.	Bills for repaving guaranteed.....	Dec. 15, 1905.
880	P. Flanigan & Son.	Repaving.	Over drains.	Bills for repaving guaranteed.....	Dec. 11, 1905.

ANNUAL REPORT OF

O. W. CONNET

ASSISTANT CITY ENGINEER

1904

City Engineer's Office,
Baltimore, Md., December 31, 1904.

Mr. B. T. Fendall,
City Engineer.

Dear Sir :—I respectfully submit the following report of the work done under my direction during the year ended December 31, 1904.

This includes paving done by the city and paid for by assessment on the abutting property ; new improved pavements paid for out of the annual levy ; new paving, etc., in front of city property ; work done by the city and paid for by private parties; supervision over guaranteed street paving; reconstruction, painting and repairs of bridges and culverts; supervision of Light street and Block street drawbridges; footway pavements; part of clearing streets and tearing down buildings in the Burnt District after fire of February 7 and 8; grade establishments up to July 1; cement and brick testing; surveys and estimates for paving, etc., assessments for street paving, footway paving and repairs; surveys; specifications, etc.

STREETS PAVED BY ASSESSMENT.

During the year 1904, only a small amount of paving was done out of funds collected by assessment from the abutting property owners. This was due to the fact that the collection of money on a number of streets was delayed by appeals to the City Court. One street was paved with COBBLESTONE, another partly paved with COBBLESTONE, another was paved with MACADAM, two others which are to be paved with MACADAM have been begun but are not completed; and the money has been collected on another MACADAM street but no work has been done. Assessments have been made up for nine streets, and contracts have been let for two others which will be

made up during the winter, so that in all there have been eighteen assessment streets which have been advanced to varying stages during the year. The following detailed statement gives this information for each street:

CHASE STREET, from the east side of Patterson Park avenue to the west side of Milton avenue, was paved with COBBLESTONE, and paid for by assessment on the abutting property owners, under authority of Ordinance No. 158, approved May 9, 1903. The work was done by Patrick Reddington, under his contract (No. 806), dated October 5, 1903. Work was begun on August 31, 1904, and completed on October 6, 1904, and is guaranteed for two years from the latter date. The total length of the pavement is 759.4 lin. ft., and the width between curbs is 39.6 feet.

The amount and cost of the work is as follows:

Final Estimate.

Grading	95.36	cu. yds.	at	$ .30...	$ 28 61
New 4½ in. curb	149 90	lin. ft.	at	.75...	112 43
Old curb reset	1,155.70	" "	at	.12...	138 68
New flagstones set	959.10	sq. "	at	.45...	431 60
Old flagstones reset	190.50	" "	at	.10...	19 05
Vitrified brick paving	22.50	" yds.	at	.60...	13 50
New cobblestone paving	1,727.00	" "	at	1.05...	1,813 35
Cobble repaving in cross streets	392.20	" "	at	.36...	141 19
Cobble repaving	1,288.40	" "	at	.54...	695 74
Cost of grading and paving					$3,394 15
Advertising, $70.44; inspection, $90.00					160 44
Total cost of Chase street					$3,554 59
Refunded to property owners					186 34
Total					$3,740 93

Of this amount, $2,652.63 was collected from the property owners for paving Chase street, and $1,088.30 was charged to "Cross streets."

TWELFTH STREET, between the northeast side of Windsor Mill road and the south side of Windsor avenue, was paved with MACADAM, under authority of Ordinance No. 152,

approved May 8, 1903. The street was graded for a width of 32 feet, gutters 4 feet wide with vitrified brick bottoms, and cobble rebuts were paved on either side of the street, and a 6-inch macadam pavement 24 feet wide was laid in the middle of the street. The work was done by Charles A. Hook, Jr., under his contract (No. 809) dated October 17, 1903. Work was begun on June 20, 1904, and completed on July 1, 1904; and is guaranteed for 2 years from that date. The total length of street improved is 150.0 feet and the width including gutters, is 32 feet. The cost to property owners was $1.10 per front foot.

Final Estimate.

Grading	9.0	cu. yds.	at	$ .40...	$ 3 60
Macadam	424.25	sq. yds.	at	.46...	195 16
Vitrified brick gutters with cobble rebuts	110.48	sq. yds.	at	.85...	93 91
Vitrified brick gutters with cobble rebuts, repaved	56.20	sq. yds.	at	.60...	33 72
Cobble repaving	5.31	sq. yds.	at	.45...	2 39
Vitrified brick gutter	10.4	lin. ft.	at	.20...	2 08
Flagstones	162.85	sq. ft.	at	.42...	68 40
Amount paid contractor					$399 26
Advertising, $53.47. Inspection, $19.88					73 35
Total cost of Twelfth street					$472 61
Amount refunded					5 92
Total					$478 53

Of this amount, $312.84 was collected from property owners, and $165.69 was paid out of the "Cross-streets fund."

CLIFTON AVENUE, from the east side of Tenth street to the west side of Chelsea Terrace, was to have been MACADAMIZED for a total width of 32 feet, under authority of Ordinance No. 155, approved May 8, 1903. A contract, No. 810, was made with Charles A. Hook, Jr., dated October 17, 1903, an assessment made up, the money collected and the work from Tenth street to Twelfth street completed on October 5, 1904. The property owners west of Twelfth street made a protest

against the narrowing of the street along the street railway tracks. The work west of Twelfth street was stopped on August 31, and an ordinance introduced providing for a wider pavement along the tracks and a reassessment of the property. This ordinance was passed, but was defective, and another one has been introduced. The average length of the completed work is 966 feet, and the width is 32 feet.

The cost to the property owners was $0.642 per front foot.

The cost of the work already done is as follows:

Third Estimate.

Macadam	2,593.16	sq. yds.	at $ .49...		$1,270 65
Vitrified brick gutters with cobble rebuts, repaved	986.90	sq. yds.	at $ .60...		592 14
Grading	542.3	cu. yds.	at $ .34...		184 38
New flagstones	884.0	sq. ft.	at $ .42...		371 28
Flagstones reset	221.0	sq. ft.	at $ .12...		26 52
Flagstones reset at Tenth street...	240.0	sq. ft.	at $ .12...		28 80
Amount paid contractor					$2,473 77
Advertising 1903, $11.70. 1904, $39.48					51 18
Inspection					165 00
Total					$2,689 95

Of this amount, $1,131.22 was charged to Clifton avenue, and $1,558.73 was charged to "Cross-streets."

The total amount of money collected under Ordinance No. 155 was $2,664.97.

TENTH STREET, from the northeast side of Windsor Mill road to the north side of Chesapeake avenue, is being MACADAMIZED, under authority of Ordinance No. 149, approved May 8, 1903. The street is graded for a width of thirty-two feet. Gutters four feet wide with vitrified brick bottoms and cobblestone rebuts are to be paved on either side and the centre of the street for a width of twenty-four feet is to be macadamized with a four-inch base of gabbro-stone from one-half to two-and-a-half inches in size and a top coat two inches thick of gabbro-stone from one-quarter to one inch in size with suffi-

cient rotten rock and screenings to bind the stone together and thoroughly rolled. The total cost to the property owners was $1.21 per front foot where new gutters are laid, and $1.09 per front foot where cobble rebuts are repaved. The total amount of money collected from the property owners was $5,501.15, The work is being done by Charles A. Hook, Jr., under his contract, No. 808, dated October 17, 1903. Work was begun on October 17, and stopped on account of weather on December 9, 1904. About two-sevenths of the work has been done.

The following statement shows the cost of the work:

First Estimate.

Macadam	1,500 sq. yds.	at	$ .45...	$ 675	00
Vitrified brick gutters with cobble rebuts repaved	912 " "	at	.60...	547	20
Grading	2,312 cu. "	at	.30...	690	00
New flagstones	84 sq. ft.	at	.42...	35	28
Flagstones reset	88 " "	at	.12...	10	56
				$1,958	04
Less 20% retained				391	61
Amount paid the contractor				$1,566	43
Advertising, 1903, $11.71; 1904, $31.45				43	16
Inspection, 1904				84	00
Amount paid to date				$1,693	59

All of this amount was charged to paving Tenth street.

TWENTY-FIRST STREET, from Oak street to Jefferson Place, is being paved with COBBLESTONE under authority of Ordinance No. 53, approved March 7, 1904. The work is being done by Owen Patterson, under his contract, No. 857, dated July 6, 1904. The south half of the street was unpaved and the cost of this work was assessed against the abutting property owners. The amount collected was $966.66. Work was begun on November 22 and stopped on account of bad weather on December 9, 1904. The work not being completed in 1904, no payments were made except for advertising, which was $48.64.

EIGHTH STREET, from North avenue to Walbrook avenue, is to be paved with MACADAM, similar to Clifton avenue and Tenth street, under authority of Ordinance No. 151, approved May 8, 1903. The work is to be done by Charles A. Hook, Jr., under his contract No. 807, dated October 17, 1903. The money has been collected, but owing to the lateness of the season, the contractor has not been notified to proceed with the work. The amount collected from the property owners is $754.73. The estimated amount to be paid by the city is $679.72, making a total of $1,434.45. The amount spent for advertising is: 1903, $11.70; 1904, $31.45; total, $43.15. Work on this street will begin early in the Spring.

HENRY STREET, from Warren avenue to Hamburg street, to be paved with BELGIAN BLOCKS, is in the same condition as at the time of the last report. The amount assessed against the property owners is $1,038.58. The amount spent by the city for advertising is $49.84.

NORTHWEST STREET, from Fulton avenue to Payson street, to be paved with VITRIFIED BRICK, is still in the City Court, as reported last year. The amount assessed against the property owners is $10,277.82. The amount spent by the city for advertising is $77.85.

STOCKHOLM STREET, from Carroll street to Wicomico street, is to be paved with COBBLESTONE at the expense of the property owners, under authority of Ordinance No. 103, approved December 17, 1902. The contract, No. 793, to do the work was awarded to Patrick Reddington on March 26, 1903, and assessments made up and forwarded to the City Register. The amount assessed against the property owners is $6,464.51, and the estimated amount for the city is $2,251.20; total, $8,715.71. The amount spent for advertising is $38.82.

DUCATEL STREET, from Eutaw Place to Bolton street, is directed to be paved with ASPHALT BLOCKS, at the expense of the property owners, under authority of Ordinance No. 159, approved May 9, 1903. A contract, No. 844, dated March

12, 1904, was made with John L. Robertson to do the work. Assessments have been made up and are now in the hands of the Tax Collector, but owing to an opinion of the City Solicitor, collections have not been made as yet. The amount assessed against the property owners is $6,988.37, and the estimated amount for the city is $1,140.38, making a total of $8,128.75. The amount spent for advertising is for 1903, $35.58; 1904, $51.81; total $87.39.

PAYSON STREET, from Fayette street to Edmondson avenue, is to be paved with ASPHALT BLOCKS at the expense of the property owners, under authority of Ordinance No. 22, approved November 28, 1903. A contract, No. 846, dated March 12, 1904, was awarded to Patrick Keelty to do the necessary grading, and another contract, No. 845, dated March 12, 1904, was awarded to John L. Robertson to do the paving, curbing, etc. Assessments were made up and forwarded to the City Register. An appeal has been made, and the case is now in the City Court. The amount assessed against the property owners is $25,629.34, the estimated amount for the city is $5,661.50, making a total of $31,290.84. The amount spent by the city for advertising is $59.73.

GROVE STREET, from Fayette street to Fairmount avenue, is to be paved with VITRIFIED BRICK, at the expense of the property owners, under authority of Ordinance No. 51, approved March 7, 1904. The work is to be done by the Baltimore Contract and Wrecking Company under their contract, No. 865, dated August 13, 1904. Assessments have been made up and are in the hands of the Tax Collector. The amount assessed against the property owners is $2,842.97, and the estimated cost to the city is $255.63, making a total of $3,098.60. The amount spent by the city for advertising is $62.98.

WALBROOK AVENUE, from Ninth street to Thirteenth street, is to be paved with MACADAM, at the expense of the property owners, under authority of Ordinance No. 52,

approved March 7, 1904. The work is to be done by Daniel Sullivan, under his contract, No. 861, dated August 4, 1904. The assessments have been made up and forwarded to the City Register. The amount assessed against the property owners is $4,792.77, and the estimated cost to the city is $1,675.78, making a total of $6,468.55. The amount spent by the city for advertising is $54.10.

BALDWIN STREET, from Park avenue to Druid avenue, Woodberry, was to have been paved with COBBLESTONE, at the expense of the property owners, under authority of Ordinance No. 82, approved May 24, 1904, but was found to be a private street.

COURTLAND STREET, from Lexington street to Saratoga street, is to be paved with treated WOODEN BLOCKS, at the expense of the property owners, under authority of Ordinance No. 104, approved June 20, 1904. The work is to be done by Daniel Sullivan and John C. Leonard, under their contract, No. 868, dated August 30, 1904. The assessments have been made up and are in the hands of the Tax Collector. The amount assessed against the property owners is $3,410.08, and the estimated cost to the city is $616.06, making a total of $4,026.14. The amount spent by the city for advertising is $53.68.

CHESAPEAKE AVENUE, from Tenth street to the Liberty road, is to be paved with MACADAM, at the expense of the property owners, under authority of Ordinance No. 106, approved June 20. 1904. The work is to be done by Hook & Ford Contracting Company, under their contract, No. 869, dated September 8, 1904. Assessments are being made up and work can be begun early in the spring. The amount assessed against the property owners is $5,069.19, and the estimated cost to the city is $255.10, making a total of $5,324.29. The amount spent by the city for advertising is $36.05.

PATUXENT STREET, from Baltimore street to Fairmount avenue, is to be paved with VITRIFIED BRICK, at the expense

of the property owners, under authority of Ordinance No. 107, approved June 20, 1904. The work is to be done by the Baltimore Contract and Wrecking Company, under their contract, No. 866, dated August 13, 1904. The assessments have been made up and forwarded to the City Register. The amount assessed against the property owners is $3,376.53, and the estimated cost to the city is $645.31, making a total of $4,021.84. The amount spent by the city for advertising is $32.39.

LAMONT AVENUE, from Oliver street to Ensor street, is to be paved with ASPHALT BLOCKS, at the expense of the property owners, under authority of Ordinance No. 93, approved June 15, 1904. The work is to be done by the Maryland Pavement Company, under their contract, No. 871, dated September 15, 1904. The assessments are being made up in this office. The approximate estimate of the cost of this street is $11,000. The amount spent by the city for advertising is $70.51.

AIKEN STREET, from North avenue southward, is to be paved with COBBLESTONE, under authority of Ordinance No. 79, approved May 18, 1904. The work is to be done by the Baltimore Contract and Wrecking Company, under their contract, No. 870, dated August 27, 1904. The approximate cost of this work will be $850. The amount spent by the city for advertising is $37.35.

IMPROVED PAVEMENTS PAID FOR BY THE CITY.

MCCOMAS STREET, from Hanover street to Creek alley, was paved with ASPHALT BLOCKS under authority of Ordinance No. 156, approved May 9, 1903. The cost of the work was paid by the city out of an appropriation of $13,800, in the Ordinance of Estimates for 1904. This is the only street provided for in the Ordinance of Estimates for 1904.

The street was paved with 3x5x12-inch trap rock ASPHALT BLOCKS on a four-inch concrete foundation and one-half-inch

mortar bed. The length of street paved is 695 feet and the width between curbs is 39.6 feet. The work was done by John L. Robertson, under his contract, No. 843, dated March 12, 1904. Work was begun on May 7, and completed on June 17, 1904, and is guaranteed for five years from the latter date.

Following is the amount and cost of the work:

Final Estimate.

Asphalt block paving	3,276.07 sq. yds.	at	$2.39	$7,829	81
New 5-inch curb set	1,410.52 lin. ft.	at	1.06	1,495	15
Extra grading	409.66 cu. yds.	at	.42	172	06
Old 4½-inch headers set	230.35 lin. ft.	at	.26	59	89
Old curb redressed and reset	6.50 lin. ft.	at	.44	2	86
Old curb reset	3.70 lin. ft.	at	.20		74
New headers set	5.70 lin. ft.	at	.82	4	67
Cobblestone repaving	20.03 sq. yds.	at	.36	7	21
Flagstones reset	7.00 sq. ft.	at	.10		70
Total paid contractor				$9,573	09
Advertising, $25.17; Inspection, $100.50				125	67
Ditching, $5.25; 66 feet 8-inch T. C. Pipe, $9.24				14	49
				$9,713	25

This amount was charged to McComas street, leaving a balance of $4,896.75.

PAVING AND REPAVING CROSS-STREETS.

The amount of money spent out of this fund under my direction was $5,983.10. Of this amount, $1,525.85 was for new VITRIFIED BRICK paving on two street intersections, $1,825.28 for work in connection with MACADAM streets in Walbrook, $1,088.30 for COBBLESTONE on Chase street, $1,534.92 for footway repairs at street intersections, and $8.75 for grading. A detailed statement follows:

STREET INTERSECTIONS.

The intersections at Walbrook avenue and Monroe street, and at Walbrook avenue and McKeen street, were paved with VITRIFIED BRICK on a concrete base. The materials were pur-

chased by the city, and the work was done by contract. The area paved in the two intersections was 735.2 sq. yds. The Monroe street intersection was paved with Maxwell repressed vitrified brick, and the McKeen street intersection with Maxwell wire cut vitrified brick.

The cost of the work was as follows:

Item.	Total.	Cost per sq. yd.
Grading 273 cu. yds. at 50c	$ 136 50	$ .1856
Six-inch concrete foundation (58c. per sq. yd)....		
Toltec cement, 395 bags at 30c	118 50	.1612
No. 2 crushed stone, 96.8 cu. yds. at $1.55		
No. 3 crushed stone, 2.45 cu. yds. at 1.80	154 45	.2100
Gravel, 64 cu. yds. at 83c	53 12	.0721
Lumber	13 45	.0182
Mixing and laying concrete	88 22	.1200
Brick pavement ($1.31 per sq. yd)		
Repressed brick, 18,105 at $23 per M.		
Wire cut brick, 14,000 at $21 per M.	710 41	.9662
Hauling brick at $2 per M.	72 00	.0979
Counting, piling, etc	16 92	.0231
Screened sand, 52 cu. yds. at $1	52 00	.0707
Paving (labor)	110 28	.1500
Total	$1,525 85	$2.0750

The intersection formed by the Windsor Mill road, Twelfth street and Clifton avenue was shaped up, a gutter paved, and street macadamized in connection with the paving of Twelfth street, at a total cost of $254.55, as follows:

From final estimate on Twelfth street	$165 69
26.09 cu. yds. broken stone at $2.20	57 40
Gas Company moving street lamp	5 68
Hauling curb and setting same	6 00
Inspection and labor spreading stone	19 78
Total	$254 55
Macadam, gutters, etc., in connection with the paving of Clifton avenue	$1,558 73
Cobblestone paving, etc., in connection with the paving of Chase street	1,088 30
Inspection on Tenth street	12 00
Grading at Old York road and Kennedy lane	8 75

FOOTWAY REPAIRS.

Repairs to footways in street intersections have been continued as heretofore by one bricklayer and one carter. The repairs cover the entire city and are usually small. A considerable time is expended in going from one job to another, where several jobs, sometimes from four to eight, are done in one day. The number of repairs made is 771, with an average of 45.5 square feet each. The total area laid with new brick is 5,158.8 square feet, and the area repaved with old brick is 29,578 square feet. The average cost of labor for both kinds of paving is 3.45 cents per square foot. The total cost of the work is as follows:

Labor, grading, paving, etc	$1,209 10
21,020 No. 2 brick at $10.50 per M	220 71
3,000 No. 2 brick at 9.00 per M	27 00
1,000 No. 1 hand-made brick	12 00
78.9 cu. yds. sand at $ 0.8375	66 11
	$1,534 92

New brick on hand at City Yard, 2,950.

FOOTWAY CROSSINGS.

About 3,000 wire cut vitrified brick and 895 repressed vitrified brick were left over after paving the intersection of Walbrook avenue and Monroe street. These brick were turned over to Mr. James A. Paige, to be used on footway crossings, and $83.59, the cost of the same, was charged to this account.

PAVING IN FRONT OF CITY PROPERTY AND "SPECIAL."

A considerable amount of grading, paving and curbing was done this year in front of city schoolhouses. The amount spent for this work under my direction was $11,308.68. Of this amount, $729.73 was carried forward from last year's account to grade Cromwell street, and is called paving in front of city property, "Special." The balance of $10,578.95 came out of the fund for "Paving in front of City Property" for 1904.

The following detailed statements give the cost and location of the work:

CROMWELL STREET, from Twenty-second street to Kennedy lane, and KENNEDY LANE, from Twenty-second street to Cromwell street, were excavated to the curb grade by Patrick Keelty, under his contract, No. 863, August 6, 1904, as shown below:

CROMWELL STREET, from Twenty-second street to Kennedy lane:

Excavation	2,964.08 cu. yds. at	$0.32	$948 74

KENNEDY LANE, from Twenty-second street to Cromwell street:

Excavation	1,969.0 cu. yds. at	$0.32	$ 630 08
Gutter stone	40.0 lin. ft. at	0.25	10 00
Setting gutter stone	70.0 lin. ft. at	0.05	3 50
Paving cobble gutter	456 0 sq. ft. at	0.10	45 60
			$1,637 92

Of this amount, $729.73 was charged to "Paving in front of City Property, Special," and $908.19 to "Paving in front of City Property" for 1904.

CROMWELL STREET, from Twenty-second street to Kennedy lane, in front of School No. 74, was paved with Maxwell repressed VITRIFIED BRICK, on a 4-inch gravel concrete base, and curbed with 6-inch armored concrete curb. By an agreement with the Kennedy estate the entire street was paved at the same time, the city paying for the west half of the street, and the Kennedy estate paying for the east half. Enough gravel for the concrete foundation was taken from the street and school lot, so that the only expense for this material was the labor of getting it out and replacing it with other material. The east half was paid for direct by the Kennedy estate. The total area of the pavement is 1,186.8 sq. yds. The area paid for by the city is 603.3 sq. yds. On this job one bag of cement made 2.5 sq. yds. of 4-inch concrete base.

The cost of the west half is as follows:

Items.	Cost.	Cost Per Sq. Yd.
27,591 repressed vitrified brick at $23.00	$ 634 57	$1.0519
266 bags Atlas cement at $0.36 net	95 73	.1587
41.21 cu. yds. stone dust at $1.00	41 21	.0683
Grading and getting out gravel, 603.3 sq. yds. at 20c	120 66	.2000
Laying 4-inch concrete base, 603.3 sq. yds. at 12c.	72 39	.1200
Laying vitrified brick, 603.3 sq. yds. at 13	78 43	.1300
Hauling brick at $2.50 per 1,000	77 66	.1287
Counting brick and inspection	42 00	.0696
Total cost of paving	$ 1,162 65	$1.9272
287.5 lin. ft. armored concrete curb at 65c	186 88	
Brick for footway crossing	26 85	
60.0 ft. gutter stone at 30c	18 00	
Laying brick crossing and gutter stone	8 05	
Repaving 250 sq. ft. cobblestone	8 75	
Total cost	$ 1,411 18	

CHESTNUT AND FOURTH AVENUES. The streets in front of School No. 55 were graded by Patrick Keelty, under his contract, No. 863, dated August 6, 1904, and six-inch armored concrete curb was set by the Filbert Paving and Construction Company. The cost of the work was as follows:

Fill on Chestnut avenue	1,205.6 cu. yds. at 44c	$ 530 46
Fill on Fourth avenue	1,394.4 cu. yds. at 44c	613 54
Laying 6-inch armored curb	477.3 lin. ft. at 65c	310 25
Furnishing and laying 10-inch T. C. Pipe 14 ft.		13 19
		$1,467 44

MILLINGTON LANE AND LEHMAN STREET, in front of School No. 68, new curb was set, the streets graded down, gutters paved and the streets MACADAMIZED. The cost of the work was as follows:

4½-inch curb	294.0 lin. ft. at $0 60	$176 40
4½-inch circles	6 ft. 10 in. at $1.20	8 20
Cobblestone (in alley)	15.8 perches at 1.85	29 23
Gravel	26.0 cu. yds. at 0.83	21 58
Grading and macadam	421.7 sq. yds. at 0.64	269 89
Curb set	301.8 lin. ft. at 0.10	30 10
Cobble repaving in alley	850.0 sq. ft. at 3½c.	29 75

Cobble repaving and gutter	1,079.3 sq. ft. at 2½c.	26 98
Hauling gutter brick from City Yard	700 bricks at $1.25	8 75
Hauling cobble from Walbrook av	16.0 perches at 1.25	20 00
Extra grading		30 00
		$650 88

WALBROOK AVENUE AND SMALLWOOD STREET. The entire width of these streets in front of School No. 68 was paved with Maxwell repressed VITRIFIED PAVING BRICK, on a 4-inch gravel and stone concrete base. New curb was set on the north side of Walbrook avenue, opposite the school lot, and the curb on the east side of Smallwood street, opposite the school, was reset. The area paved is 1,985.6 square yards.

The cost of the work was as follows:

Items.	Total Cost.	Cost per Sq. Yd.
382.00 cu. yds. grading at 25c	$ 95 50	$.0481
167.00 cu. yds. gravel at 83c	138 61	.0698
74.10 cu. yds. 1½ inch crushed stone at $1.55	114 86	.0578
737.3 bags Atlas cement at $35.28	260 14	.1310
88.800 Maxwell vitrified brick at $23.00	2,042 40	1 0286
Hauling brick from Oak Street Yard	272 02	.1370
1,985.60 sq. yds. laying concrete and paving	496 40	.2500
199.48 cu. yds. stone dust at $1.00	199 49	.1004
Inspection	72 00	.0362
Counting brick at cars	43 74	.0220
Total cost of pavement	$3,735 16	$1.8809
236 ft. 5 in. new 4½-inch curb at 60c	141 85	
400 ft. old 4½-inch curb reset at 10c	40 00	
4 ft. 8½-in. new curb circles at $1.20	5 65	
1,060.7 sq. ft. cobble repaving at 2½c	26 52	
Hauling brick to Biddle street bridge	28 70	
	$3,977 88	

TWENTY-SIXTH STREET, from St. Paul street to Hargrove alley, in front of School No. 53. The full width of the street was paved with Maxwell VITRIFIED BRICK on a 4-inch gravel concrete foundation. Six-inch armored concrete curb was set on the south side of the street, opposite the school lot. The total area paved was 540 square yards, and the cost is as follows:

Items.	Total Cost.	Cost per Sq. Yd.
540.00 sq. yds. grading at 9c	$ 48 60	$.0900
540.00 sq. yds. laying 4-in. concrete at 12c	64 80	.1200
540.00 sq. yds. laying pavement at 13c	70 20	.1300
60.80 cu. yds. gravel at 83c	50 47	.0934
24.300 Maxwell vitrified brick at $23.00	558 90	1.0350
Hauling brick at $2.50	61 09	.1132
39.52 cu. yds. stone dust at $1.00	39 52	.0732
207.30 bags Atlas cement at 36c	74 65	.1382
Inspection $24.00; counting brick $9.58	33 58	.0622
Hauling gravel, etc	11 00	.0203
Total cost of pavement	$1,012 81	$1.8755
Paving footway	1 39	
80.00 sq. ft. cobble repaving at 2½c	2 00	
120.70 lin. ft. armored curb at 65c	78 46	
	$1,094 66	

LOVEGROVE ALLEY, south from Twenty fifth street, along the east side of School No. 54, was paved with Maxwell wire cut VITRIFIED BRICK, on a 4-inch gravel concrete base, from the gutter in the center of the alley to the curb along the school lot. New 10-inch gutter stone was laid in the gutter. The area paved is 103.1 square yards, and the cost of the same is as follows:

Items.	Cost.	Cost per Sq. Yd.
4,605 Maxwell wire cut vitrified brick at $21	$ 96 71	$ .9381
Hauling brick	12 90	.1252
Hauling gravel for concrete	3 55	.0344
38 bags Atlas cement at $0.3529	13 41	.1301
103.1 sq. yds. laying concrete and pavement	41 24	.4000
103.1 sq. yds. grouting pavement	1 54	.0150
9 cu. yds. stone dust at $1.00	9 00	.0872
Inspection, $7.79; counting brick, $1.09	8 88	.0860
Total cost of pavement	$187 23	$1.8160
148 feet regulation gutter stone at 30c	44 40	
152.6 feet gutter stone reset at 3c	4 58	
170 sq. feet cobblestone repaved at 2½c	4 25	
Piling brick, $3.33; hauling, $1.25	4 58	
	$245 04	

TEN-FOOT ALLEY, east of Charles street, south of Twenty-fifth street, on the west side of School No. 54, was paved with Maxwell wire cut VITRIFIED BRICK. A part of the cobblestone on the west side of the alley was taken up and concrete laid, and the rest of the cobblestone was trued up with concrete. On this foundation a cushion of stone dust about one inch thick was laid and the brick paved so as to throw the gutter to the west side of the alley. After the brick were laid they were grouted with Portland cement. The area laid was 174.5 square yards, and the cost is as shown below:

Items	Cost.	Cost per Sq. Yd.
7,795 Maxwell wire cut vitrified brick at $21	$ 163 69	$.9381
Hauling brick at $2.50	21 83	.1252
Hauling gravel for concrete	6 00	.0343
62 bags Atlas cement at $0.3528	21 87	.1253
174.5 sq. yds, laying concrete and paving at 35c	61 08	.3500
174.5 sq. yds. grouting pavement	2 62	.0150
15.23 cu. yds. stone dust at $1.00	15 23	.0873
Inspection, $13.21; counting brick, $1.87	15 08	.0864
Total cost of pavement	$307 40	$1.7616
808 sq. feet cobble repaving at 2½c	2 02	
	$309 42	

HARGROVE ALLEY, north from Twenty-sixth street, was to have been paved along the side of School No. 53, but this was not done on account of bad weather setting in before the work could be started. A part of the brick were delivered and stored on the school lot. The amount spent is as follows:

Maxwell virtrified blocks, 6,300 at $23	$144 90
Hauling and piling blocks	8 33
Total	$153 23

FOOTWAY PAVEMENTS, around city parks and squares, were relaid and repaired where necessary. This work was done by this Department this year for the first time. New footways were laid in front of two new school lots. The amount and cost of this work was as follows:

LOCATION AND AMOUNT OF WORK.

	Cost.
Carroll Park, Columbia avenue side:	
Repairs, 93 sq. ft	$ 7 13
Federal Hill Park, Warren avenue side:	
New pavement and repairs, 1,434 sq. ft	128 87
Riverside Park, Randall street and Johnson street side:	
Repairs, 409 sq. ft	17 77
Patterson Park, Baltimore street side:	
Repairs, 284 sq. ft	6 82
Madison Square, Eager street side:	
Repairs, 47 sq. ft	3 70
Broadway Square and Orleans street:	
Repairs to cement walk	3 67
Ashland avenue and Chester street:	
New pavement along school lot, 533 sq. ft	42 82
Monroe street, near Harlem avenue:	
New pavement along school lot, 1,778 sq. ft	150 25
Total	$361 03

SUMMARY OF PAVING IN FRONT OF CITY PROPERTY.

Cromwell street and Kennedy lane grading	$1,637 92
Cromwell street paving	1,411 18
Chestnut street and Fourth avenue grading	1 467 44
Millington lane and Lehman street macadam	650 88
Walbrook avenue and Smallwood street paving	3,977 88
Twenty-sixth street paving	1,094 66
Lovegrove alley paving	245 04
Ten foot alley paving	309 42
Hargrove alley paving	153 23
Footways	361 03
Total	$11,308 68

REPAIRS OF ROADS, STREETS, ETC.

The work under my charge, which was charged to this account, includes the wooden blocks for Calvert street, repairs to steam road roller, and repairs to certain footways. The fire of February 7 and 8 burned a considerable number of wood blocks in the Calvert street pavement, between Baltimore street and German street. It was intended to repair

this pavement and the treated wood blocks were purchased, but on account of the building material on the street, the work was not done, and the blocks were stored at the City Yard. The tubes of the steam road roller had rusted out and were replaced by forty-seven new 2-inch tubes. The plank footway on Marshall avenue, which is maintained by the city, was completely repaired. Repairs were made to other footways which were damaged by the city, or when the owners failed or refused to make the repairs when notified, the cost of the work being charged to this account and bills sent to the Tax Collector for the amount. The total amount of work done under my direction and charged to Repairs of Roads, Streets, etc., was $1,115.73, as shown below.

Items and Location.	Labor.	Material.
12,005 wood blocks at $52.85 for Calvert street....	$.....	$634 46
Hauling same to City Yard.....	13 78	.....
Repairs to steam road roller.....	71 45	45 79
Footway on Marshall avenue.....	79 45	83 59
Footway north of Mount Vernon avenue bridge.	.....	3 00
Footway No. 20 E. Lexington street.....	3 25	2 57
Footway Lexington street near Harrison.....	82	31
Footway 415 S. Duncan alley.....	1 63	63
Footway North avenue bridge	13 00	2 94
Footway on Philadelphia road	1 25	.....
Footway east side of Cathedral street near Biddle street	3 25	3 15
Footway Nos. 104, 112, 114, 120 and 204 East Lexington street.....	3 25	84
Footway east side Liberty street, north of Baltimore street.....	6 50	42
Footway south side of Fort avenue near Belt street	88 00	27 85
Footway south side of Oliver street near Chester street	13 00	11 55
	$ 298 63	$ 817 10
Totals	$1,115 73	

PAVING CERTIFICATES AND INTEREST.

The guarantee on the sheet asphalt pavements on Mt. Royal avenue and Fulton avenue, laid with Alcatraz asphalt in 1898, expired in 1903, but the paving certificates were not presented until this year. These two pavements were laid at a total cost of $1.52 and $1.54 per square yard, respectively, including grading, 6-inch concrete base, 1½-inch binder coat, and 2 inches wearing surface. The pavements have been laid over six years, and have had practically no repairs due to wear. The guarantee on the sheet asphalt pavement on Calvert street bridge, the granite block pavement on Gay street, and on the macadam pavements on Augusta avenue and Collins street expired during the year. The 10 per centum retained and the interest on the same was paid, as shown below:

Street.	From	To	Certificate.	Interest.
Mt. Royal ave	Guilford ave	Cathedral st	$3,811 40	$ 762 28
Fulton ave	Presstman st	Peun. ave	2,881 10	576 22
Gay st	Jones' Falls	Exeter st	438 17	87 63
Augusta ave	Frederick rd	Walrad st	187 59	22 51
Collins ave	Frederick rd	Walrad st	192 66	23 12
Calvert st. bridge.(roadway)			432 36	86 47
Total			$7,943 28	$1,558 23

PRIVATE PAVING AND INSPECTION.

Money deposited by private individuals or corporations to pay for work done by the city is credited to this account, and the cost of the work charged against the account. The amount of this fund spent under my direction during the year is $504.62. The principal work done in this way was the removal of the cable-slot-rails on Charles street bridge over Jones' Falls at the expense of the United Railways and Electric Company, a small amount of work for the Consolidated Gas Company and others, as shown below:

Removal of slot-rail from Charles street bridge	$416 00
Lumber for Street Cleaning Department	34 43
Repairs to McComas street for Consolidated Gas Co	14 49
Removing house for Geo. H. Weaver	11 25
Repairs to fender piles for Maryland Dredging Co	16 12
Repairs of Boyer street for F. Bohn	6 50
Repairs to footway for Mrs. G. Hinckley	3 25
Sundry small repairs	2 58
Total	$504 62

In addition to the above a considerable amount of work has been done for the United Railways and Electric Company in repairs to bridge floors, and the cost of the same was charged to "Bridges," pending a decision of the court as to the responsibility of the Railway Company.

The amount of the bills rendered the United Railways and Electric Company for this work on bridges in 1904 was as follows:

Mar. 30, 1904,	Lombard street bridge	$	335 15
May 24, "	Edmondson avenue bridge over railroad		419 77
" " "	Preston street bridge		157 06
" 31, "	Wilkens avenue bridge		17 28
Aug. 1, "	Light street bridge		45 49
Oct. 31, "	Hillen street bridge		8 48
Nov. 16, "	Fayette street bridge		440 81
Dec. 9, "	Maryland avenue bridge		2 75
" 16, "	Hillen street bridge		100 96
" 20, "	Wilkens avenue bridge		8 78
Total		$1,536 53	

October 28, 1904, at Fayette street bridge, an area of 41 square feet was paved with wooden blocks over the Chesapeake and Potomac telephone conduits at either end of the bridge at a cost of $18.00.

INCIDENTALS.

The principal item of this account in my office was the establishing of grades by the City Surveyor which had to be charged to this account, because there was no appropriation

for grade establishments this year. After July 1st, 17 grades were established and 15 profiles made by the City Surveyor, at a total cost of $256.00.

Other small items to the amount of $49.94 were charged to this account, making a total of $305.94.

EMERGENCY FIRE FUND.

Directly after the great fire of February 7 and 8, 1904, it became necessary to clear the streets of debris and pull down dangerous walls. A part of this work was assigned to me. On February 10, ten foremen and 250 men began work of clearing the streets, and on February 18 the main streets were clear and these men were laid off. The amount expended for clearing streets under my direction was $2,436.61 for labor and $152.44 for material, or $2,589.05. For nearly two months after the fire one large gang under my direction was at work pulling down dangerous walls. Part of the walls were pulled down with ropes, but the more difficult ones along the harbor were pulled down with a steam winch on a scow and with the tug "Baltimore." The amount expended under my direction for this work and for lumber for the first loading platform to remove the debris was $664.69 for labor and $399.47 for material, or a grand total of $3,653.21 for work in connection with the fire. The area burned over in the fire of February 7 and 8 was 140 acres. The length of streets in this area is eight miles, and one-half mile of alleys.

GRADING, PAVING, ETC., BURNT DISTRICT FUND.

The only work done under my direction and charged to this fund was the paving of the footways on the south side of Baltimore street, west of the bridge, at a total cost of $49.80.

MAINTENANCE OF BRIDGES AND CULVERTS.

The appropriation for maintenance of bridges and culverts in the Ordinance of Estimates for 1904 was $40,000.00, and $293.42 was carried over from 1903, to complete the new floor

on Madison street bridge, making a total appropriation for bridges of $40,293.42. This amount includes the maintenance of Light street and Block street drawbridges, which this year, for the first time, was included in the general appropriation for the maintenance of bridges.

The most important work done during the year in connection with bridges was the replacing of the old wooden bridge on West Lexington street with a ferro-concrete arch; the sheathing and painting of the lower part of the 280 foot span on St. Paul street bridge over the railroad tracks; strengthening floor beams and laying treated wood block pavement on Monument street bridge; laying new cement footways on Calvert street, Pratt street and Gay street bridges; painting and laying new treated wood block floor on Fayette street bridge; painting and laying new plank floors on North Monroe street bridge and Edmondson avenue bridge, over P. B. & W. R. R.; laying vitrified brick roadway pavement on Biddle street bridge; completing treated wood block pavement on Madison street bridge; removing slot rail and painting Charles street bridge; new concrete arches on Montebello avenue and Dorsey's lane; new plank floors on Lombard street and Cedar avenue bridges; and strengthening trusses of Edmondson avenue bridge over Gwynn' Falls.

Following is a brief statement of the more important details of the larger pieces of work:

Light Street Bridge.—The accounts for this bridge were included in the general bridge account this year, for the first time. The new top floor at the south end of Light street bridge, which was laid in 1897, was relaid new in 1900. This latter floor was again laid new this year for a distance of 1485 lineal feet from the south end of the bridge. The bottom floor was rotten and had to be entirely renewed with new 2x10 inch 18 feet plank laid diagonally. All of the stringers under the east hand-rail and about one-third of those under the roadway floor were rotten and had to be replaced by new ones. At the same time the stringers were so arranged as to

give the roadway floor, which was originally laid level, a fall of 3 inches to the east. This will add to the life of the roadway floor by allowing the mud and water to run off and save about $40 per year on the sweeping of the bridge. One hundred and sixty-five pieces of the best of the old top floor was taken up and relaid in one place at the end of the new floor. On March 21, the steamer "Katahdin" ran into the protection pier in front of the keeper's house and sunk it. Bids were solicited to rebuild the pier, the lowest being $1,690. On the basis of these bids, the Law Department settled with the Canton Lumber Company on payment of $1,250. The work was done by the city at a total cost of $1,578.46. A new eighteen horse-power vertical boiler was purchased and set up to replace the old horizontal boiler, which was worn out. The other horizontal boiler was repaired and all the machinery put in good repair. Both boilers are insured for three years from August 17 by the Hartford Steam Boiler Inspection and Insurance Co. Thirty-two fender piles around the draw-pier were pulled up about 4 feet and sawed off, and new fender timbers put on the same. The bulkhead at the south end of the bridge was repaired, a part of the old draw-pier removed and the rest repaired. Sixty new splices were put on the trestle work under the bridge at low tide. Eighty-four new hand-rail posts were put in and other repairs made to the hand-rail. New water supply-pipes were put in under the channel from the house north of the draw to the engine house and the keeper's house. The railway and telephone companies removed twenty-nine poles from the east side of the bridge and replaced them by new piles set in the mud free from the bridge. The launchway north of the draw span, which was built last year, has proven very convenient for small boats and has relieved the draw of a number of openings.

The cost of maintaining the bridge is shown by the following itemized statement, viz.:

Items.	Labor.	Material.	
Engineer and bridge tenders	$3,166 08		
Coal, $299.83 hardware, oil, etc		$ 335 80	
Repairs and renewal of roadway floor*.	628 99	393 88	
Repairs and renewal of footway floor	30 95		
Repairs to trestle work	74 80	15 84	
Repairs to machinery and boilers	194 19	197 36	
New 18-horse power vertical boiler		160 00	
Repairs to buildings	38 52	21 08	
Repairs to hand-rail	*128 35	24 35	
Fenders around draw pier	112 76	32 81	
Sweeping bridge	89 34		
New lumber (not yet used)		1,414 80	
Piling and cutting plank	41 24		
Cutting ice	50 83	4 75	
New pier account, "Katahdin"	593 79	984 67	
Old draw pier and south bulkhead	29 81	37 59	
	$5,179 65	$3,622 93	
Total			$8,802 58

The total number of openings of the draw was 10,884.

The following table gives the travel across the bridge and through the draw:

Travel Across Bridge.		Travel Through Draw.	
Double teams	86,071	Tugs	9,953
Single teams	99 684	Scows	5,099
Street cars	73,859	Schooners	645
Mail cars	7,948	Sloops	419
Funerals	836	Steamers	397
		Rafts	29
		Barges	355

The approximate tonnage of the different kinds of materials passing through the draw is as follows:

Tonnage Through Draw.		Tonnage Through Draw.	
Mud	634,080	Garbage	6,255
Coal	49 459	Marble	4,791
Lumber	32,666	Fertilizer	3,293
Oil	21,987	Sand	3.118
Ice	17,010	Stone	2,390
Wood	8,789	Sundries	2,084
Brick	6,838		
Total			792,760

*The total cost of the roadway floor should include $2,297.66 worth of new lumber purchased in December, 1903, and laid this year.

St. Paul Street Bridge.—The constant passing of engines under the 280-foot span of this bridge has kept the iron covered with smoke and steam. This had eaten into the iron to such an extent that it had seriously damaged the bridge. In order to protect the iron it was decided to build a tight sheathing of matched pine flooring under this span entirely enclosing the lower surface, and to so construct it as to form a permanent scaffolding to be used in cleaning and painting the lower portion of this span. The scaffold is carried by ¾-inch and ⅞-inch iron hangers clamped to the bottom flange of the floor beams. These hangers pass through 4x6-inch Georgia pine stringers running in the direction of the bridge, and spaced 5 feet 4 inches apart to which the 1x3-inch matched Georgia pine flooring is nailed. The floor is stiffened by 2x3-inch scantling midway between the stringers. The bridge is 68 feet wide and the scaffolding is 70.5 feet wide. The central portion 55 feet wide is level and 8½ inches below the bottom of the floor beams. The two outer portions are 7.5 feet wide and are on an incline so as to enclose the space below the floor, but are so arranged that they can be lowered to a level with the central portion and used as a scaffold to clean and paint the bridge. The tongue and groove of the flooring were painted before it was laid, and after it was laid the entire top surface of the flooring was covered with a heavy coat of coal tar, so that it practically keeps out all of the smoke and steam. Wrought iron pipe extend from the scupper holes through the scaffolding to carry off the drainage from the surface of the bridge. The total area of the scaffolding is 19,740 square feet. As the work of building the scaffolding progressed the floor beams, buckle plates, etc., on the bottom of the 280-foot span were cleaned and painted. Beginning at the north end, the first two panels were painted with Keystone paint, the next five with Nobrac paint, the next nine with Etna Iron paint, and the last four with Princess Metallic Brown paint. Troughs were put up by the Northern Central Railway to catch the

water from the scupper holes at the south end of the bridge over the passenger tracks and is carried off by down spouts at the pier.

The cost of the scaffolding was as follows:

468 hangers and fastenings	$ 236 45
80 pieces 3½-inch iron pipe 6 foot long, and clamps	184 32
26,362 feet B. M. matched flooring	724 97
12,687 feet B. M. 2x3-inch and 4x6-inch lumber	314 23
Nails, paint, tools, etc.	140 65
Labor	1,415 83
Total	$3,016 45

Average cost per square foot, 15.3 cents.

LEXINGTON STREET CULVERT (over Gwynn's Run).—The old wooden bridge over this run was on the south half of the street and was in very bad condition. It was decided to replace it by a ferro-concrete arch and extend it to the full width of the street. The "Kahn" bars were used in reinforcing the concrete. The area drained at this point is 2,700 acres. The computed water-way for this area, with a 3-inch rainfall, using slope of 3 per cent. and 0.6 for factor C, in McMath Formula, and 1 per cent. slope, through arch, was found to be about 90 square feet. It was found, however, to be more economical to build the arch with area of water-way 103.2 square feet. The arch is 66 feet long, 12.25 feet in diameter, with side walls averaging 3.62 feet above flow line. The arch is 8 inches thick at the key and 12 inches at the springing line, with buttresses at intervals of 6 feet. The foundations were cut down in solid rock to good bearings about 2.5 feet below the flow line. The south end wall, 22.6 feet long, is of concrete, faced with stone on the roadway side. The north end wall, 55.1 feet long, was built entirely of stone from the abutments and wing walls of the old bridge and from the rock quarried for the foundation of the arch. The arch has 5.5 feet of earth cover at the crown. The amount of concrete in the arch and south end wall is 105 cubic yards. Amount of stone masonry in north end wall and facing of

south wall 100 cubic yards. The concrete was mixed by a "Ransom" mixer in the proportions of 1 part Atlas Portland cement, 3 parts gravel and 6 parts broken stone. The mortar in masonry was 1 of cement to 3 of sand. As this is the first reinforced concrete arch which has been built by the city, the cost of the work is given below in considerable detail in order that the cost may be compared with a concrete arch without the iron bars The first tabulation below gives the itemized cost and cost per cubic yard of all the items connected with the concrete work. The second tabulation gives the cost of a concrete arch without reinforcement and of dimensions given by "Trautwine" for first-class masonry, using the same factors of cost as in the first tabulation, except that the cost of foreman and labor is assumed to be $1 per cubic yard instead of $2.25, the actual cost of the labor for the reinforced concrete. It should be mentioned that the heavy rain storm of September 14 washed out the centers and entirely destroyed the greater part of them, thus almost doubling the cost of this item.

Cost of reinforced concrete arch as constructed, 105 cubic yards:

Items.	Labor.	Material.	Cost per Cu. Yd.
Foreman and labor hauling tools, etc., for concrete	$ 46 25	.....	$ .440
Hauling mixer, oil, etc	45 83	$ 13 07	.561
Foreman and labor placing "Kahn" bars	56 59	.....	.539
"Kahn" bars, 7,317 lbs. at 4⅛c	.....	301 82	2.875
Foreman and labor on concrete	235 85	.....	2.246
Crushed stone	.....	181 73	1.731
Sand	.....	63 01	.600
Cement (Atlas Portland)	.....	174 34	1.660
Foreman and labor on centers and forms	276 17	.....	2.630
Material for centers and forms	.....	94 93	904
Totals ($1,489.59)	$660 69	$828 90	$14.186

Comparative cost without iron bars (270 cu. yds).

Items.	Labor.	Material.	Cost per Cu. Yd.
Foreman and labor hauling tools, etc....	$ 46 25	.....	$ .171
Hauling mixer, oil, etc.....	45 83	$ 13 07	.218
Foreman and labor on concrete.....	270 00	.....	1.000
Crushed stone (as above).....	....	467 29	1.731
Sand (as above).....	.....	162 00	.600
Cement (as above).....	.....	448 28	1.660
Foreman and labor on centers and forms (as above).....	276 17	.....	1.023
Materials for centers and forms.....	.....	94 93	.352
Totals ($1,823.82).....	$638 25	$1,185 57	$6.755

From this it will be seen that on the assumption that the cost of placing the concrete would have been $1 per cubic yard, there would be a saving on this job of $334.23.

The total cost of the entire work as built is as follows:

	Items.	Labor.	Material.	Total.
105	cu. yds. Ferro concrete (as above).	$ 660 69	$ 828 90	$1,489 59
100	cu. yds. stone masonry.....	511 88	131 53	643 41
77.7	lin. ft. cement coping.....	35 72	9 82	45 54
	Building shed, fence, etc.....	32 22	10 00	42 22
	Rock excavation (channel and foundation).....	371 28	4 32	375 60
	Tearing out old bridge.....	27 99	.....	27 99
	Inlet covers and pipes.....	5 34	52 12	57 46
	Making fill (1,460 cu. yds.)....	291 71	.....	291 71
	Watchman	95 01	.....	95 01
	Totals.....	$2,031 84	$1,036 69	$3,068 53

The area of face wall pointed up was 1,060 square feet, and the cost was $8\frac{1}{10}$ cents per square foot.

MONUMENT STREET BRIDGE.—Formerly the stringers on this bridge were carried on a piece of wood which rested on the lower flange of the plate-girder floor beams. Dirt and moisture, which collected between the wood and iron, caused the rust to eat entirely through the lower edge of the web of these floor beams, so that it was necessary to strengthen them.

This was done by riveting ¼"x14"x19-7" steel plates on each side of the web plates, and ⅜"x3"x5" angles to these plates and the lower flange of the girders. An entirely new floor of treated Georgia pine plank and treated wood paving blocks, was laid. The new treated 3x12-inch stringers are carried on top of the floor beams. The bottom floor is of treated 3x12-inch plank dressed to a uniform thickness and laid close. The treated wood paving blocks are laid directly on these plank and poured with a coat of coal tar paving compound. The total area of block pavement on the bridge is 2,568 square feet. The total cost of the labor and material for the new floor and stringers is $1,676.75 or 65.3 cents per square foot. About 3,000 lbs. of paving mixture was used on the surface of the blocks or about 1⅛ lbs. per square foot. The cost per square foot was $1.28 for material and 47 cents for labor or a total of 1¾ cents per square foot for paving mixture. The ironwork of the bridge was cleaned and painted with two coats of Etna Iron paint. New footway floors were laid.

Calvert Street Bridge.—The old sheet asphalt pavement on the footways was entirely worn out and full of holes, which let the water through on to the buckle plates which support the pavement. The two upper coats of this asphalt pavement were removed and a cement pavement laid by the Filbert Paving & Construction Co., under Contract No. 859, dated July 14, 1904, and is guaranteed for five years from August 13, 1904. The area and cost of the footway is 10,429.89 square feet at 10¾ cents equals $1,121.21. The concrete foundation is about 4 inches thick and the wearing surface 1 inch thick. The wearing surface is composed of one part Vulcanite Portland cement, one part washed sand, and one part granolithic stone, and covered with a dust coat of cement and beach sand in the proportion of two of cement to one of sand. The surface is cut into squares and the joints poured with asphaltic cement. The portion of the bridge below the floor was cleaned and painted with two coats, from the north end of the first row of columns south of

the north truss, this being the portion over the railroad tracks. The viaduct north of the north truss was painted with Metallic Brown. The north four panels of the north truss were painted with Etna Iron paint. The next six panels were painted with Nobrac carbon paint. From the south pier of the north truss to the first cross strut was painted, the east half with Nobrac paint and the west half with rubber paint furnished by the National Fireproofing Co. From this strut to the first row of columns was painted with Keystone paint.

Fayette Street Bridge.—The old wooden floor and stringers of this bridge were in bad condition and it was decided to lay a new floor, using treated wood for stringers and lower floor and treated wood blocks for the upper floor or pavement proper. The United Railways and Electric Company put in new 10x12-foot stringers and new 9-inch girder-rails on the south driveway. The Chesapeake and Potomac Telephone Company relaid and repaired its cables under the north driveway on new wooden supports carried on the floor beams, and paved over its cables on either end of the bridge with wooden blocks. The city then put in the rest of the floor and pavement sending a bill to the Railway Company for their proportionate part. The total net area of wooden blocks on the bridge proper is 2,000 square feet, and 41 square feet over Chesapeake and Potomac Company's cables. The total cost of the stringers, lower floor and wood block pavement on the bridge proper was $1,400.31, or 70 cents per square foot. Two thousand seven hundred and forty pounds of paving pitch was used, making the cost for the pitch 1.5 cents per square foot and labor putting it on 1.1 cents per square foot. The entire bridge was cleaned and painted with two coats of Etna Iron paint. New plank sidewalks were laid on both sides of the bridge.

Monroe Street Bridge (North.)—As originally built the wooden stringers were carried on the lower flange of the floor beams. This construction held the steam and smoke emitted from passing locomotives and caused the floor beams and

lower part of the trusses to rust very rapidly with no chance to clean and paint them. The floor and stringers were removed and all of the ironwork cleaned and painted with two coats of paint. The hand-rail, floor beams and parts of the truss below the floor was painted with Etna Iron paint and the rest of the trusses with Metallic Brown. The old stringers were reset on top of the floor beams, a new 2-inch bottom floor laid and new 3-inch top floor laid on the east driveway. The top floor on the west driveway was laid with the best of the old 3-inch plank. The corrugated iron on the hand-rail was in bad condition and was replaced by angle iron. Twenty-two thousand two hundred and twelve feet B.M. of new lumber was laid and 32,616 feet B.M. of old lumber relaid, or 54,828 feet B.M., at a cost of $220.94 for labor, or $4.01 per M. The labor for scaffolding and cleaning cost 16 cents per square foot, labor for painting 92 cents per square foot, and the paint cost 34 cents per square foot.

Edmondson Avenue Bridge (over P. B. & W. R. R.)—The entire floor and stringers of this bridge were removed and the floor beams and parts of the trusses below the floor cleaned and painted with two coats of Metallic Brown. The United Railways and Electric Company laid new 12x12-inch stringers and new 9-inch girder rails across the bridge. The city then laid new stringers and floor along and between the tracks in the two roadways occupied by the street railway tracks. The cost of this work was $419.77, and a bill was sent to the Railway Company for this amount. The best of the old with some new stringers, new top and bottom floors of Georgia pine were laid on the north roadway. Old stringers and a few new ones were laid on the south, or unused driveway, and a new 2-inch floor laid. The cost of labor laying 26,913 feet B.M. of new lumber and relaying 10,706 feet B.M. of old lumber was $300.95, or $8.00 per 1,000 feet B.M. In order that this bridge should be available for its total width, the grade of Edmondson avenue east from the bridge should be raised, so as to give

a reasonable approach and the south side of the avenue filled out to its full width. The present grade of the avenue is 5 per cent., and as this is the principal thoroughfare to the city from the west a better grade should be established, which could be done now before the adjacent property is built upon.

Block Street Bridge.—No general repairs were made to this bridge, as the plans of the Burnt District Commission contemplate such changes as will do away with it entirely. The draw was opened 9,537 times on 312 week days, making an average of 31 times per day. The bridge was saved from burning on February 8th by the faithfulness of the keeper and assistant keeper. The number of teams passing over the bridge on 312 week days was 134,494, or an average of 431 per week day.

Biddle Street Bridge.—The roadway floor of this bridge was originally paved with sheet asphalt. This pavement had been repaired from time to time, but had so disintegrated that the rain water easily ran through it, causing the buckle plates to rust at the seams. It was decided to remove the wearing surface of the asphalt and pave the roadway with vitrified brick. The lower layer of asphalt, used to true the surface over the buckle plates, was covered with a heavy coat of coal tar paving composition to make it impervious to water. A bed of stone dust was then laid and struck off so as to give the pavement a crown of 4 inches. The Maxwell repressed vitrified block pavement was then laid and the joints poured full of coal tar paving composition. The area of the brick pavement is 620 square yards and the cost of the same is as follows:

Items.	Cost.	Cost Per Sq. Yd.
Labor removing old asphalt	$ 48 85	$ .079
29,000 Maxwell vitrified brick at $23.00	667 00	1.076
Hauling Brick	67 20	.108
Piling brick	22 71	.037
Sand, $4.60; cement, $6.96	11 56	.018
Stone dust, 34.83 cu. yds. at $1.00	34 83	.056
Labor laying brick	139 26	.225
2 coats paving composition	150 00	.242
Total	$1,141 41	$1.841

Of this amount $28.70 was charged to Paving in Front of City Property."

Madison Street Bridge (over Jones' Falls).—The work of strengthening the floor beams was under way at the end of the year 1903, as given on page 89 of the report for that year. The old floor had been removed, the new creo-resinate plank and paving blocks had been received and paid for. The strengthening of the floor beams and laying the new floor was completed in January. The work done was very similar to that done on Monument Street Bridge and reported above. The entire cost of the work was $2,514.99. Of this, $1,400.64 was paid for lumber and paving blocks, and $118.04 for labor in 1903. The total area of block pavement on the bridge is 2,878 square feet. The total cost of the labor and material for the new roadway floor and stringers was $1,787.68, or 62.1 cents per square foot. The cost of filling the joints between the blocks with No. 4 paving compound was 2 cents per square foot. All of the ironwork of the bridge was cleaned and painted with two coats of Metallic Brown paint.

Charles Street Bridge (over Jones' Falls).—This bridge was thoroughly cleaned and painted with two coats of Metallic Brown paint, except the handrail, which was painted with Etna Iron paint. The cable slot-rails on this bridge were removed and a plate bolted over the opening by the city at the expense of the United Railways and Electric Company. The cost of the work was $416.00.

Montebello Avenue Arch.—The old wood bridge crossing the stream just north of the Belt Railway was decaying and masonry falling out, so that it was decided to replace it with a concrete arch. The area drained is 291 acres. The area of water-way provided for is 38.5 square feet. The diameter of the arch is 6.05 feet, the side walls are 4 feet high above the flow line and from 21 to 33 inches below the flow line. The arch is on a skew with the street and is 41 feet long. The arch and end walls contain 115 cubic yards

of concrete. The arch is 1 foot 4 inches thick at the crown and 3 feet at the springing line. The total cost of all the material and labor connected with the job was $791.26, or a cost of $6.88 per cubic yard. The concrete was made from Atlas Portland cement and gravel taken from the stream just above the culvert, in the proportions of 1 to 9. About one-fifth of the total volume of the concrete was made of spalls and large stones. The cement cost $1.89 per cubic yard, and required 5¼ bags to the cubic yard of concrete.

The cost of the various items was as follows:

Items.	Labor.	Material.
Foundation, dams, etc	$104 85	.....
Hauling tools, etc	5 65	.....
Hauling sand, stone, etc	30 63	.....
Concrete, centers and forms ($2.96 per cu. yd.)	340 65	.....
18-inch T. C. pipe, sand, etc	10 00	24 98
Lumber, $41.04; stone, $15.77	.....	56 81
Cement ($1.89 per cu. yd.)	.....	217 69
Totals ($791.26)	$491 78	$299 48

Dorsey's Lane Arch.—This arch was built to replace an old wooden bridge which was in bad condition. The stone wing walls and abutments were falling apart and it was necessary to entirely rebuild. The area drained at this point is 321 acres. The necessary area of waterway was found to be about 35 square feet, but it was found more economical to build just inside the old abutments, so that the actual area of waterway as built is 61 square feet. The old bridge was 18 feet wide, but the new arch was continued to the full width of the lane, so that it is 28 feet long in the direction of the arch, which is on a skew with the lane. The arch is a segment of a circle with span of 9.35 feet and rise of 3.8 feet on side walls 5.0 feet high. The arch is 15 inches thick at the crown and 36 inches at the springing line. The total amount of concrete masonry in arch and end walls is 116 cubic yards. Concrete of Atlas cement, sand and crushed stone in the proportions of 1, 4 and 5, was used in the founda-

tion, about 30 cubic yards. The rest was of Atlas cement one part, to sand eight parts, and this mortar was filled with large pieces of broken stone. The work was begun late in the year, and was not entirely completed at the end of the year. A part of the bills had not been paid by the end of the year, but as the total cost is known, it is given in detail in the table below:

Items.	Cost.	Cost Per Sq. Yd.
19.15 tons No. 2 stone at $1.25	$ 23 94	.....
65.65 tons spawls at 75c	49 24	$0.631
123 loads sand at 50c	61 50	.530
722.2 bags Atlas cement at $0 3528	254 79	2.196
Foreman and labor on centers and forms	121 92	1.051
Material for centers and forms	77 44	.668
Foreman and labor on concrete	414 17	3.570
Total for concrete	$1,003 00	$8.646
Excavation for foundation	74 10	
Hauling, $18.25; watchman, $5.00	23 25	
Boots, $11.88; tools, $7.20; drain box, $11.90	30 98	
Making fill	71 99	
Total cost	$1,203 32	

Of this amount, $551.61 for labor, and $231.98 for material or $783.59 was paid in 1904, and $165.72 for labor and $254.01 for material, or $419.73 remains to be paid in 1905.

Lombard Street Bridge.—The floor of this bridge was nearly destroyed by the fire of February 7th and 8th, and the hand rail damaged by falling walls. The street railway company relaid their tracks on new 12x16-inch stringers and the city laid new floors and stringers, sending a bill for $335.15 to the United Railways and Electric Company for the portion between the rails and two feet outside the same. Part of the ironwork was cleaned and painted with two coats of Metallic Brown.

Edmondson Avenue Bridge (over Gwynn's Falls).—This bridge was built by the Baltimore County Commissioners in 1879. It has three spans of three trusses each. The floor of

the bridge is about 60 feet above Gwynn's Falls. The trusses are of wood and iron. In 1895 the E. A. C. & E. C. E. R. R. laid its tracks across the bridge on the south side, and strengthened the south trusses of the east and west spans by building trestles under the centers of the trusses. The middle span was strengthened by building an intermediate truss under the railway tracks. The wood of these old trusses has begun to decay and parts of them have been renewed during the year. New 6x8-inch additional posts were put in under the ends of the trusses on the east and west abutments. The trestle bents under the east span were extended so as to carry the centers of the north and center trusses, and the iron counter rods were strengthened by additional new rods so as to act as main tie rods. A considerable amount of work will have to be done to this bridge to keep it in repair, as it is now over 25 years old.

Cedar Avenue Bridge (over Jones Falls).—This bridge was completed in August, 1890. The lower floor of the bridge was laid of 1½-inch creosoted plank, which were found to be in first-class condition this year when the top floor was removed. A new top floor of 3-inch Georgia pine was laid. The cost of labor laying this floor was $69.03. The amount of lumber laid was 20,520 feet B. M., which gives the cost of laying $3.36 per 1,000 feet B. M.

Monroe Street Bridge (South).—This bridge is over a number of tracks of the B. & O. R. R. Co.'s Mt. Clare Yards, and the constant passing of engines has caused the iron over the main tracks to become badly pitted by rust. It is difficult to effectually protect this bridge from the action of the steam and smoke from the locomotives by means of boxing in the iron work, so that trial is being made with a cement manufactured by the Keystone Paint Co. The bridge was thoroughly cleaned with scaling hammers and wire brushes and painted as follows, viz: All of the iron below the floor over the main tracks of the B. & O. R. R., that is, beginning at the middle of the sixth panel from the south end of the

bridge, thence running north nine panels, was given a coat of Keystone brush cement and then two coats of Keystone paint. All the rest of the iron below the floor was given two coats of Metallic Brown paint. The portions of the west and center trusses over the main tracks of the B. & O. R. R., from the bottom of the floor to two feet above the floor, was painted with one coat of Keystone brush cement, one coat of Keystone paint and one coat of Metallic Brown. The east truss over the main tracks from the bottom of the floor, to two feet above the floor, was painted with one coat of Keystone brush cement and two coats of Metallic Brown paint. All the rest of the three trusses above the floor was painted with two coats of Metallic Brown paint. The cost of the labor, scaffolding and cleaning was 88 cents per square foot. The labor painting was 7 cents per square foot and the paint was 4 cents per square foot.

Preston Street Bridge.—A new top floor was laid between the rails of the street railway and a bill of $157.06 sent to the United Railways and Electric Company for the same. The bridge was entirely cleaned and painted. The east half of the bridge, about halfway down from the floor, was painted with Keystone paint. The handrails were painted with Etna Iron paint. All the rest of the bridge was painted with Metallic Brown. The total area of the surface of the iron-work to be painted on this bridge, including the handrail, is 14,600 square feet. The cost of labor, cleaning and scaffolding was 1.6 cents per square foot, the labor of painting 65 cents per square foot, and the cost of the paint was 3 cents per square foot.

Chesapeake Avenue Culvert.—The old wooden bridge across the small run west of Tenth street was in dangerous condition and was torn out and replaced by a line of 30-inch double strength Terra Cotta pipe 65 feet long, and the opening filled in over the pipe. The line of pipe is on a skew with the street.

Baltimore Street Bridge.—This bridge has 21,665 square feet of painted surface, including handrails. It was thoroughly cleaned and painted in 1900, and would have been in good condition this year, except for the water which followed down the rail of the street railway tracks and through the slot rail before the United Railways and Electric Company laid new rails across the bridge and took out the slot rail in 1903. At that time the joints between the paving blocks and next to the rail were poured with coal tar, which will probably keep the water from going through to the buckle plates. The entire bridge was cleaned and painted by the city at a total cost of $364.92. The cost of labor, cleaning and scaffolding was 57 cents per square foot; labor painting was 78 cents per square foot, and the paint cost 34 cents per square foot. The bridge was painted with two coats of Etna Iron paint.

Lexington Street Bridge, East.—This bridge is similar to Baltimore street bridge, and was also painted in 1900. The painted surface was in good condition, except at the joints of the buckle plates, which were badly rusted in some places. The total area of painted surface is 22,675 square feet. The total cost of cleaning, scaffolding, painting and paint was $335.40. The cost per square foot for labor, cleaning and scaffolding was 38 cents, labor painting was 72 cents, and paint was 38 cents. The first four spaces between girders from the south side of the bridge, and the next three spaces from the east end of the bridge to the fourth stiffener, was painted with furnace brand paint. All the rest of the bridge was painted with Etna Iron paint.

Columbia Avenue Bridge (over Gwynn's Falls).—This bridge was painted in 1900 and again this year. The total area of painted surface is 14,509 square feet. The total cost of scaffolding, cleaning and painting was $302.92. The cost per square foot of the labor for scaffolding and cleaning was $1.06, for painting was 75 cents, and of the paint was 27

cents. The hand rail was painted with Etna Iron paint, and all the rest of the ironwork with Metallic Brown paint.

Madison Street Culvert (near Montebello Avenue).—This culvert was constructed in November to replace an old wooden box culvert, which was in bad condition. The new culvert is of concrete, reinforced with round rods and expanded metal. The side walls are 4 feet 6 inches high and 10 inches thick, and have ¾-inch verticle rods, spaced 12 inches center to center, 2 inches from the inside face of walls. The top of the culvert is a 10-inch slab with a 5-foot clear span. This slab is reinforced with ¾-inch rods, spaced 12 inches, center to center, 2 inches from the bottom surface of the slab; and on top of these rods sheets of No. 10 expanded metal with 3-inch mesh. The concrete was made of Atlas Portland cement and gravel, in the proportions of one to seven, and was thoroughly rammed around the rods and expanded metal. The floor of the old culvert which was left in is of 3-inch plank, on 4x6 inch cross ties. This floor, which is constantly wet, is in good condition. The wood side wall on the east side was left in, and served for lagging on the outside of the concrete on that side. The earth was cut down vertically on the west side, and formed the outside face of the west wall. The gravel came from Cromwell street, and the only cost for same was loading and hauling. The expanded metal used came from the stock at the City Yard, and if purchased would add 31 cents to the cost per cubic yard of concrete.

The total cost of the culvert, including tearing out old culvert, centers, new ferro-concrete culvert and filling over same, was $421.51. The box culvert contains 25 cubic yards of concrete, and the end walls 30 cubic yards, or a total of 55 cubic yards, so that the total cost as above per cubic yard was $7.67. The cost of the items was as follows:

Items.	Total Cost.	Cost Per Cu. Yd.
Total labor as above	$ 249 68	$4 54
Cement, 320 bags at 34c.	108 76	1 97
Gravel, 55 cu. yds., at 25c.	13 75	25
¾-inch iron rods, 1,764 lbs., at 1.9c	33 52	61
Hauling, $4.25; stone, 9 loads, $2.25	6 50	12
Lumber, $3.36; rubber boots, $5.94	9 30	17
Total	$421 51	$7 66

UNION AVENUE BRIDGE (over Jones' Falls,)—This bridge was cleaned and painted with two coats of Metallic Brown paint at a total cost of $233.74.

NORTH AVENUE BRIDGE.—The handrail of this bridge was cleaned and painted with two coats of Keystone Graphite paint at a cost of $215.09.

MAIDEN CHOICE CULVERT (over Maiden Choice Run.)—This is an old stone culvert with stone wing walls. The masonry is of rough stone and was laid up with lime mortar. The wing walls to the south of the culvert were falling down and were rebuilt. The face walls were pointed up and the worst places in the soffit of the arch.

PRATT AND GAY STREET BRIDGES.—These bridges have new cement sidewalks on both sides.

REESE STREET CULVERT (south of Brady avenue.)—The old wood box culvert was removed and replaced by a 27-inch terra cotta pipe.

PHILADELPHIA ROAD BRIDGE.—This bridge was removed and replaced by extending the sewer in Grove street to north side of road. This work was done by the Sewer Department. The filling and raising of the road was charged to bridges.

In addition to the above, thirty other bridges and culverts had such repairs and painting as was necessary. The following table gives the character and cost of labor and material on each bridge, and includes $65.25 expended at the City Yard, under the direction of Mr. James A. Paige, Assistant City Engineer:

Name of Bridge.	Labor.	Material.	Total.
Argyle avenue—			
Repairs to footway	$ 11 09	$ 11 74	$ 22 83
Baltimore street—			
Scraping and scaffolding	119 25	4 60	
Painting (Etna Iron)	166 69	74 38	
	$ 285 94	$ 78 98	$ 364 92
Biddle street—			
Vitrified brick roadway	$ 289 14	$ 823 57	$ 1,112 71
Block street—			
Salaries	$1,406 25	.....	
Supplies	.....	55 71	
Repairs to machinery	1 50	.....	
Repairs to footways	39 65	10 97	
Fenders on piles	31 06	.....	
	$1,478 46	$ 66 68	$ 1,545 14
Calvert street—			
Scraping and scaffolding	$ 394 19	$ 1 38	
Painting (Metallic Brown, Etna, Nobrac, Keystone and Rubber)	328 56	168 11	
New cement footway and inspection	36 00	1,121 21	
Repairing name plates	1 84	1 75	
	$ 760 59	$ 1,292 45	$ 2,053 04
Calverton road culvert—			
Extending wing wall	$ 40 83	$ 16 53	$ 57 36
Canton avenue—			
Repairs to footway	$ 5 83	$ 9 43	
New top roadway floor	100 09	38 95	
	$ 105 92	$ 48 38	$ 154 30
Cedar avenue—			
Tearing up old top floors	$ 28 58	.....	
New top roadway floor	69 03	$ 517 86	
Replacing guard rail	13 00	2 75	
	$ 110 61	$ 520 61	$ 631 22
Charles street—			
Scraping and scaffolding	$ 457 62	$ 4 00	
Painting (Metalic Brown)	327 07	93 10	
Taking out slot rails, city	22 53	1 98	
	$ 807 22	$ 99 08	$ 906 30

Name of Bridge.	Labor.	Material.	Total.
Chase street—			
Repairs to footway	$ 6 42	$ 13 61	
Repairs due to expansion of blocks	59 38	9 17	
	$ 65 80	$ 22 78	$ 88 58
Chesapeake avenue culvert—			
Laying 30-inch T. C. pipe	$ 111 25	$ 198 85	
Filling	86 19		
	$ 197 44	$ 198 85	$ 396 29
Clipper Mill (footway bridge)—			
Repairs	$ 3 33		$ 3 33
Columbia avenue—			
Repairs to hand rail	$ 19 18		
Repairs to roadway	6 35	11 74	
Repairs to footway	3 75	3 73	
Scraping and scaffolding	154 20		
Painting (Metallic Brown)	109 50	39 22	
	$ 292 96	$ 54 69	$ 347 65
Dorsey Lane culvert—			
New concrete culvert (incomplete)	$ 551 61	$ 231 98	$ 783 59
Eastern avenue—			
Repairs to footway	$ 83		$ 83
Edmondson avenue (over Gwynn's Falls)—			
Repairs and strengthening truss	$ 616 70	$ 287 70	$ 904 40
Edmondson avenue (over P. B. & W. R. R.)—			
Repairs to footway	$ 27 98	$ 16 43	
New roadway floor and stringers	387 31	726 50	
Scraping and scaffolding	326 49	2 70	
Painting (Metallic Brown)	70 00	30 73	
	$ 811 78	$ 776 36	$ 1,588 14
Fayette street—			
Repairs to roadway	$ 2 71		
New creo-resinate roadway and stringers	329 00	1,089 31	
New footways	26 53	74 90	
Concrete mud wall	6 08	25 32	
Scraping and scaffolding	95 23		
Painting (Etna Iron)	49 03	17 03	
	$ 508 58	$ 1,206 56	$ 1,715 14

Name of Bridge.	Labor.	Material.	Total.
Frederick road (footway bridge)—			
Tearing down and removing bridges	$ 38 75		$ 38 75
Friendship street culvert—			
Repairs to invert	$ 14 83		$ 14 83
Frisby street culvert—			
Repairs	$ 3 75		$ 3 75
Gay street—			
New cement footways	$ 6 00	$ 137 27	$ 143 27
Guilford avenue—			
Repairs to footways	$ 30 04	$ 24 93	
Scraping handrail	17 04		
Painting handrail (Etna Iron)	60 45	19 40	
	$ 107 53	$ 44 33	$ 151 86
Harmons—			
Repairs to roadway floor	$ 7 00	$ 15 63	$ 22 63
Hillen street—			
Repairs to footway	$ 92		
Repairs to roadway bet. tracks	7 08		
	$ 8 00		$ 8 00
Leadenhall and Stockholm street—			
Repairs to roadway floor	$ 23 20		$ 23 20
Lexington street, East—			
Scraping and scaffolding	$ 86 25	$ 1 00	
Painting (Etna and Furnace brand)	162 20	85 95	
	$ 248 45	$ 86 95	$ 335 40
Lexington Street, West—			
Ferro-concrete arch	$ 1,740 13	$ 1,036 69	
Making fill	291 71		
	$ 2,031 84	$ 1,036 69	$ 3,068 53
Light street—			
Totals (see detail statement)	$5,179 65	$ 3,622 93	$ 8,802 58
Lombard street—			
New roadway floors and repairs to footway	$ 220 30	$ 394 26	
Painting and scraping floor beams	62 59	10 56	
Repairs to handrail	22 30		
	$ 305 19	$ 404 82	$ 710 01

Name of Bridge.	Labor.	Material.	Total.
Loudon avenue—			
Repairs	$ 1 00		$ 1 00
Madison street—			
Reinforcing floor beams	$ 425 00	$ 160 00	
Scraping and scaffolding	78 08		
Painting (Metallic Brown)	50 92	14 22	
New creo-resinate wood roadway and stringers	202 51	66 49	
	$ 756 51	$ 240 71	$ 997 22
Madison street culvert—			
New ferro-concrete culvert	$ 267 47	$ 156 08	$ 423 55
Maiden Choice lane culvert—			
Rebuilding wing walls and pointing up old walls	$ 170 29	$ 51 28	$ 221 57
Maryland avenue—			
Repairs to footway	$ 12 30	$ 18 73	
Scraping hand-rail	7 50		
Painting hand-rail (Etna)	34 40	9 10	
Repairing roadway	2 00		
	$ 56 20	$ 27 83	$ 84 03
Monroe street, north—			
Repairs to hand-rail	$ 47 17	1 08	
Tearing out old floor	80 69		
New floor and resetting stringers.	220 94	599 09	
Repairs to footway	55 52	49 43	
Scraping and scaffolding	365 86	2 00	
Painting (Etna and Metallic Brown)	207 58	76 52	
Repairs to wall	4 08		
	$ 981 84	$ 728 12	$ 1,709 96
Monroe street, south—			
Scraping and scaffolding	$ 275 67	$1 27	
Painting (Keystone and Metallic Brown)	222 00	127 03	
	$ 497 67	$ 128 30	$ 625 97
Montebello avenue culvert—			
New concrete culvert	$ 491 78	$ 299 48	$ 791 26

Name of Bridge.	Labor.	Material.	Total.
Monument street—			
Repairing roadway floor	$ 9 95	$ 8 00	
Reinforcing floor beams	260 00	168 92	
Scraping and scaffolding	115 92		
Painting (Etna)	51 20	23 25	
Tearing out old floor	73 71		
New creo-resinate wood roadway and stringers	275 11	1,401 64	
New footways	54 67	85 54	
Concrete mud wall	8 42	35 14	
Watchman	61 66		
	$ 910 64	$ 1,722 49	$ 2,633 13
Mt. Vernon avenue viaduct—			
Scraping hand-rail	$ 19 83		
Painting hand-rail (Etna)	86 49	18 44	
	$ 106 32	$ 18 44	$ 124 76
North avenue—			
Scraping hand-rail	$ 42 34		
Painting hand-rail (Keystone Graphite)	132 25	40 50	
	$ 174 59	$ 40 50	$ 215 09
Philadelphia road—			
Tearing out old bridge	$ 14 59		$ 14 59
Pratt street—			
New cement footways	$ 9 00	$ 183 88	$ 192 88
Preston street—			
New top floor between tracks	$ 21 00	$ 121 79	
Repairs to footway	3 67	4 40	
Scraping and scaffolding	231 86		
Painting (Metallic Brown and Keystone)	93 88	43 75	
	$ 350 41	$ 169 94	$ 520 35
Reese street (south of Brady avenue)—			
Laying 27-inch terra cotta pipe	$ 74 49	$ 68 53	$ 143 02
St. Paul street—			
New expansion plates on roadway	$ 35 92	$ 12 01	
Repairs expansion plates in footway	1 83	1 40	
Protection sheathing and scaffold	1,415 83	1,600 62	
Scraping and cleaning iron	904 89	2 77	

Name of Bridge.	Labor.	Material.	Total.
Painting (Keystone, Etna, Nobrac, Metallic Brown)	322 47	229 71	
Repairs to plates under bottom chord	4 50	56	
	$ 2,685 44	$ 1,847 07	$ 4,532 51
Slingluff avenue (south of North av.)			
Repairs to roadway floor	$ 18 33	$ 33 58	$ 51 91
Union avenue—			
Repairs to footway	$ 26 84	$ 39 88	
Scraping and scaffolding	107 00	.....	
Painting (Metallic Brown)	43 75	16 27	
	$ 177 59	$ 56 15	$ 233 74
Wilkens avenue—			
Repairs to footway	$ 2 08	$ 1 47	
Repairs to roadway between tracks	9 00	9 78	
	$ 11 08	$11 25	$ 22 33
Miscellaneous—			
Labor, tools, oil and tracing drawings	$ 388 87	$ 367 10	$ 755 97

Total labor, $23,057.13; total material, $17,236.29; grand total, $40,293.42.

RECAPITULATION.

The following summary gives the totals spent for the various kinds of work done under my direction during the year 1904:

Paving in Ordinance of Estimates (McComas street)	$ 9,713 25
Paving paid for by assessment (4 streets)	5,790 28
Paving in Front of City Property	10,578 95
Paving in Front of City Property (special)	729 73
Paving Certificates and Interest	9,501 51
Paving and Repaving Cross Streets	5,983 10
Repairs of Roads, Streets, etc	1,115 73
Grading, Paving, etc., B. D. F	49 80
Emergency Fire Fund	3,653 21
Private Paving and Inspection	504 62
Footway Crossings	83 59
Maintenance of Bridges and Culverts	39,934 75
Maintenance of Bridges and Culverts (special)	293 42
Salaries	7,431 44
Incidentals (grade establishments, $256 00)	305 94
Total	$95,669 32

GRADE ESTABLISHMENTS.

Grade establishments outside the Burnt District were made by this Department, under authority of Ordinance No. 83, approved December 8, 1900, up to July 1st. After that date they were made by the City Surveyor, under authority of Ordinance No. 116, approved June 23, 1904.

Following is a list of the streets established by the City Engineer:

Street.	From.	To.
Bradford st	Ashland ave	Pennsylvania Railroad.
Caroline st	Monument st	Preston st.
Dorsey's lane	Old Frederick road	Wesley ave.
Elizabeth lane	Barney st	Heath st.
Franklin st	Monroe st	Pennsylvania Railroad.
Greenmount ave	Front st	Oliver st.
Herbert st	Payson st	Monroe st.
Hollins st	Carey st	Fremont ave.
Hudson st	Chesapeake st	Eastern city limits.
Lexington st	Monroe st	Pulaski st.
Mine Bank lane	Biddle st	Federal st.
Monroe st	North ave	Clifton st.
Mulberry st	Payson st	Smallwood st (re-est).
Payson st	Northwest st	Baker st.
Payson st	Edmondson ave	Fayette st.
Philadelphia road	Lakewood ave	Eastern city limits.
Presbury st	Pulaski st	Monroe st.
Pulaski st	Edmondson ave	Lexington st.
Ramsay st	Millington ave	Monroe st.
Saratoga st	Payson st	Smallwood st. (re-est).
Smallwood st	Franklin st	Lexington st.
Woodyear st	North ave	Northwest st.

GRADE ESTABLISHMENTS BY CITY SURVEYOR.

Street.	From.	To.
Beason st	Decatur st	Jones st.
Belleview ave	Garrison ave	1 square east.
Carroll st	Caton ave	Wellsley st.
Christian st	Millington ave	Wilkens st.
Clifton st	Fulton ave	Francis st.
Cromwell st	Kennedy lane	Twenty-second st.
Dillon st	Lakewood ave	Binney st.
Fort ave	Covington st	Webster st
Gould st	Donaldson st	Northeast st. (2 squares)
Hickory ave	Third avenue	Second ave.
Kennedy lane	Old York road	Cromwell st.
Millington ave	Wilkens ave	Ramsay st.
Stafford lane	Frederick road	Hoffman st.
Twenty-third st	Old York road	Cromwell st.
Warner st	B. & O. Railroad	Dock.
Wilkens ave	Millington ave	Old city limits.
Wooster st	Warner st	Shell st.

GRADES IN THE BURNT DISTRICT.—Soon after the streets were cleared in the Burnt District levels were run on the curb lines of all the principal streets and alleys in this area, profiles were plotted, a study made of the grades, and grade lines put on these profiles. These were later turned over to the City Surveyor, who officially established the grade lines, with some changes, to conform to the lines originally laid down in this office. The total cost of the work of running the levels, plotting the profiles, fixing the grade lines and making clear copies which were turned over to the City Surveyor was $375.00. After the grades were established the profiles were returned to this office. The necessity of showing the owners of property in the Burnt District the new grades has taken a large amount of time from the regular work in the office.

CEMENT TESTS DURING 1904.

Following is a condensed summary of the cement tests for the year, made by one of the assistants in my office:

Brand.	Proportions.	Age, Days.	Tensile Strength.	No. Tests.	Max.	Min.
Atlas	Neat.	1	299	15	393	240
Atlas	Neat.	7	578	9	645	521
Atlas	1—2½	7	423	3	440	400
Atlas	1—5	4	59	5	64	56
Atlas	1—5	8	77	5	86	70
Alpha	1—3	7	186	4	208	171
Alpha	1—3	28	347	4	375	315
Atlantic Rosendale	Neat.	1	43	3	47	41
Atlantic Rosendale	Neat.	7	74	3	80	64
Atlantic Rosendale	1—2	7	50	4	55	43
Maryland	Neat.	1	53	6	61	40
Maryland	Neat.	7	327	6	359	297
Northampton	Neat.	1	265	5	269	260
Northampton	Neat.	7	451	5	475	432
Northampton	1—3	7	155	10	231	91
Lehigh	Neat.	1	290	5	339	237
Lehigh	Neat.	5	562	3	623	507
Lehigh	Neat.	7	592	3	746	510
Lehigh	1—3	7	143	15	196	49
Lehigh	1—2	8	78	5	90	59
Phoenix	Neat.	1	218	6	302	252
Phoenix	Neat.	7	598	3	646	555
Phoenix	Neat.	28	667	3	720	616
Phoenix	1—3	7	220	3	236	203
Phoenix	1—3	28	279	3	302	261

FOOTWAY NOTICES.

The usual footway reports have been received through the Police Department and notices sent out. In most cases the notices are promptly complied with. In some cases a second notice is sent out, and in only one case did the owner neglect or refuse to comply with the notices sent him. In the latter case the work was done by the city and an assessment of same sent to the City Collector. The total number of notices sent out was 4,349. Of these, 465 were on request of the owners to repair or lay new pavements, and the rest were sent out on reports from the Police Department.

VITRIFIED BRICK TESTS.

The testing of street paving brick for the Department was made by the Highways Division of the Maryland Geological Survey. The tests for loss by abrasion is made in a standard rattler recommended by the National Brickmakers' Association, and described on page 93 of the Report of the City Engineer for 1900. The table gives the loss of the individual brick and the average of the charge. The record of the individual loss has been kept with a view to revise the specifications, so as not only to fix the allowable average loss, but also to limit the range of loss above the average. It is well recognized that a uniform lot of brick will stand better in the street than a lot with a wide range of loss in the rattler even though the average loss may be lower. The poorer brick wear out and expose the better brick to unusual impacts.

RESULTS OF BRICK TESTS MADE BY THE HIGHWAYS DIVISION OF THE MARYLAND GEOLOGICAL SURVEY.

Test.	MADE BY	Per Cent. of Loss of Individual Brick in Rattler									
		Min.								Max.	Average.
230	Maxwell	23	24	27	28	31	34	35	36	36	30
231	"	18	21	23	24	24	24	25	29	37	25
232	"	20	20	22	23	23	...	23	24	28	23
233	"	24	24	25	26	28	29	30	31	36	28
236	R. P. C. C	22	24	25	27	27	29	29	30	33	27
240	R. P. C. C	18	20	24	26	...	...	27	28	30	25
243	Clearfield	20	21	23	23	24	25	27	30	38	26
244	Maxwell	17	19	20	20	21	21	22	24	30*	21
250	Thornton	20	22	23	26	27	27	36	38	38	29
251	Maxwell	13	14	14	16	16	16	20	21	30*	18
255	Barrington	14	21	21	21	22	25	31	33	34	26
261	Maxwell	10	10	13	14	14	15	17	19	19	15
265	Porter	19	19	20	25	26	26	27	29	32	25
266	Maxwell	15	15	17	18	20	23*	25*	32*	59*	25
267	"	18	20	20	21	21	25	27	29	30	23
268	"	17	17	18	20	20	22	22	24	32	21
269	"	15	15	16	18	19	20	26	27	28*	20
270	"	13	14	16	16	16	17	19	21	29	18
271	"	14	16	17	18	18	18	21	29	31	20
272	"	13	17	17	17	20	20	23	26	44*	22

Test.	MADE BY	Per Cent. of Loss of Individual Brick in Rattler									
		Min.								Max.	Average.
273	Maxwell.....	11	11	12	16	17	18	23	27	36	19
274	"	12	13	13	13	14	18	21	40*	41*	20
275	"	13	13	16	18	18	18	21	29	34	20
276	"	11	12	13	14	15	18	18	20	20	16
278	"	11	13	13	15	15	16	16	17	20	15
279	"	14	15	15	17	18	19	19*	20*	21	18
281	"	17	19	19	22*	26	27	29	32	50*	26
282	"	14	16	18	20	22	24	24	29	30*	22
283	"	14	14	15	16	16	16	17	18	40*	18
284	"	11	14	17	17	17	18	18	20	21	17
286	"	14	16	...	..	....	...	24	29	35	23
287	"	16	19	...	...	...	...	24	27	27	23
288	"	15	23	...	...	...	...	23	31	44	27
289	"	16	21	...	...	...	...	23	25	25	22
290	"	15	17	...	...	...	...	25	32	36	25
291	"	17	23	...	...	...	...	28	28	38	25
292	"	17	17	...	...	...	...	19	22	46	24

*Brick broke in rattler.

OFFICE WORK.

An unusual number of assessment streets were worked up during the year, requiring the looking up of a great many deeds and transfers, and involving many perplexing questions in connection with private streets and alleys. The very large number of requests for information in the Burnt District took a considerable time. The usual requests from members of the City Council for estimates of the cost to pave streets have been complied with and involves a considerable amount of work.

The remodeling of the Armory for offices for the Department during the early part of the year made office work difficult for several weeks.

During the year the specifications for street paving with asphalt blocks, granite blocks, vitrified brick, macadam and cobblestone, were revised and printed in convenient book form.

Bridge Drawings—Most of the large iron bridges were built prior to 1882. The detailed plans for these bridges were made on Manila paper, which has become brittle with age and

torn from handling. Practically all of these have now been traced, and the original sheets filed in tin filing cases, and the tracings indexed and filed for ready reference in this office.

The following list shows the routine office work for the year, viz :

39 grade establishments in triplicate.
2 sets profiles of Burnt District.
52 other profiles made.
11 sets specifications prepared.
9 street assessments sheets made up.
9 street assessments plats.
5 reports on damage suits.
627 Letters written.
453 orders for material.
645 bills in triplicate checked and passed.

In conclusion, I wish to acknowledge the faithful and intelligent service which the assistants in my Department have rendered the city.

Respectfully submitted,

O. W. CONNET,
Assistant City Engineer.

REPORT OF

NEWTON M. GRAY, Ass't. City Engineer,

1904.

City Engineer's Office,

Baltimore, January 1, 1905.

Mr. B. T. Fendall,

City Engineer.

Sir—I beg to submit the following report showing the operations of the Sewer Division of the City Engineer's Department during the year ended December 31, 1904.

OGIER'S RUN SEWER.

ORDINANCE OF ESTIMATES FOR THE YEAR 1904.

This sewer was extended in the bed of Fairmount avenue, from a point 67 feet west of the west building line of East avenue, to East avenue; thence northerly, in East avenue about 100 feet and easterly to a private alley north of Fairmount avenue by a reverse curve, to a point in said private alley $15\frac{5}{10}$ feet east of the east building line of East avenue, a total distance of $214\frac{6}{10}$ feet. An inlet was constructed at the southeast corner of East and Fairmount avenue, connecting with a chamber, which was constructed at the intersection of the centre lines of the two avenues. Three additional inlets will have to be constructed at this intersection after the filling is completed. A full description of the form, dimensions and character of this sewer will be found in the report of the City Engineer for the year 1902.

Work was commenced on April 2, and completed on June 22, 1904.

STATEMENT SHOWING COST OF WORK.

Excavation, including timbering and refilling, 1,222 cubic yards at $1	$ 1,222 00
Concrete, including stone, sand, cement and labor, 652 4/10 cubic yards at $4.75	3,098 90
Brick invert, including bricks, sand, cement and labor, 383 4/10 square yards at $2.37	908 66
Inlet, manhole and connecting chamber	323 79
Masonry wall at north end of sewer	22 17
Digging trench at north end of sewer	60 42
Foreman	299 00
Watchman	144 00
Carpenter	185 00
Building dams, centers, pumping, hauling, etc	466 74
Total cost of work	$6,730 68

Charged to "Sundry Sewers" Appropriation of 1904.

Estimated cost	$6,750 00
Amount expended	6,730 68
Balance	$19 32

EXTENSION OF HARRIS CREEK SEWER.

ORDINANCE OF ESTIMATES FOR THE YEAR 1904.

This sewer was extended from the bed of Chesapeake street, from the center of Fayette street to a point 10 feet north of the north building line of the Philadelphia road, a distance of 148 feet. This section is circular in form, 3 feet 6 inches in diameter, and is built of concrete throughout, except that the lower semi-circle is lined with a brick ring, 4½ inches in thickness, which extends into the upper semi-circle to the springing line of the arch on each side. Openings were provided for inlets, which will be required in the future on the northeast and northwest corners of the Philadelphia road. Wing walls of concrete 6½ feet long were constructed at the north end of this sewer to retain the fill, when the Philadelphia road is raised to the established grade.

Work was commenced on June 21 and completed on July 28, 1904.

STATEMENT SHOWING COST OF WORK.

Excavation, including timbering and refilling, 279 cubic yards at $1.32	$ 368 28
Concrete, including stone, cement, sand and labor, 115 3/10 cubic yards at $5.05	582 27
Brick invert, including bricks, sand, cement and labor, 109 5/10 square yards at $2.08	227 76
Forms for concrete and brickwork	42 50
Building centers, etc	30 00
Building temporary bridge over Philadelphia road, temporary inlet, and pumping, ditching, etc	156 07
Terra cotta pipe for inlet connections	3 60
Filling in Philadelphia road over sewer	128 41
Water Department for supply connections	16 37
Foreman	134 00
Watchman	74 00
Carpenter	38 13
Total cost of work	$1,801 39

Charged to "Sundry Sewers" Appropriation of 1904.

Estimated cost	$2,000 00
Amount expended	1,801 39
Balance	$198 61

FAYETTE STREET SEWER.

ORDINANCE OF ESTIMATES FOR THE YEAR 1904.

This sewer, consisting of a 36-inch terra cotta pipe, was constructed in Fayette street, from Lakewood avenue to Montford avenue, connecting with the "Harford Run Sewer" in Lakewood avenue. Inlets were constructed on the northwest and southwest corners of Luzerne street, Milton avenue and Montford avenue, connecting with the main sewer by means of brick chambers. To facilitate the construction of this work the United Railways and Electric Company was requested to abandon both tracks as far west as Montford avenue, which request was promptly complied with. This allowed us sufficient room for storing excavated and other materials, and thereby decreasing the cost of the work

very materially. The depth of cut ran from 14 feet at Lakewood avenue to 7 feet at Milton avenue; thence to 13½ feet at Montford avenue, which was found to be necessary to obtain sufficient grades on the "laterals," running north and south in said avenue. The total length of this sewer is 1,229 feet.

Work was commenced on May 27 and completed on September 2, 1904.

STATEMENT SHOWING COST OF WORK.

Excavation, including timbering and refilling, 2,147 cubic yards at $1.15		$2,469 05
1,122½ lineal feet 36-inch D. S. terra cotta pipe at $3.99 (less 2 per cent. discount)		4,389 20
Laying pipes, including sand, cement and labor, 1,178 lineal feet at 32c		376 96
Inlets, connecting chambers and manholes		1,642 40
Hardware, tools and building cement house		149 80
Consolidated Gas Company, for moving lamp post		6 15
Repaving over trenches and intersections		344 43
Incidentals, such as watchman, building dams, pumping, cleaning up street, etc		396 72
Foreman		280 00
		$10,054 71
Value of material left over and sent to storage yard, 87½ feet D. S. 36-inch terra cotta pipe at $3.99 (less 2 per cent. discount)	$342 14	
Hauling same	17 00	
		359 14
Total cost of work		$10,413 85

Charged to "Sundry Sewers" Appropriation of 1904.

Estimated cost	$10,400 00
Amount expended	10,413 85
Amount expended over estimated cost	$ 13 85

LATERAL SEWER IN MONTFORD AVENUE, NORTH.

ORDINANCE OF ESTIMATES FOR THE YEAR 1904.

This sewer was constructed in Montford avenue from Fayette street to Orleans street; thence in Orleans street to

Patterson Park avenue. Inlets were constructed as follows: One on the west side of Montford avenue and the alley north of Fayette street; on the northwest and southwest corners of Orleans street, and on the northwest and southwest corners of Patterson Park avenue. The depth of cut ran from 13 feet at Fayette street to 7½ feet at Orleans street; thence to 8 feet at Patterson Park avenue. The total length of this sewer is 846 feet. Work was commenced on August 16, and completed on October 4th, 1904. On account of the extremely cold weather during the month of December, the repaving at the intersection of Orleans street and Patterson Park avenue has not been done.

STATEMENT SHOWING COST OF WORK.

Excavation, including timbering and refilling, 1,165 cubic yards at $1	$1,165 00
422 lineal feet 30-inch D. S. terra cotta pipe at $2.64 (less 2 per cent. discount)	1,091 80
352 lineal feet 24-inch D. S. terra cotta pipe at $1.30 (less 2 per cent. discount)	448 45
Laying pipe, including cement, sand and labor, 815 lineal feet at 26c	211 90
Inlets, connecting chambers and manholes	1,084 61
Hardware, tools, etc	69 14
Incidentals, such as building dams, pumping, cleaning of street, etc	163 51
Foreman	280 00
Repaving over trenches and intersections	370 14
Consolidated Gas Co., moving lamp	5 55
	$4,890 10

SENT TO CITY YARD.

23 lineal feet 30-inch D. S. terra cotta pipe at $2.64 (less 2 per cent. discount)	$59 50	
Hauling same	6 00	
		65 50
Total cost of work		$4,955 60

Charged to "Sundry Sewers" Appropriation of 1904.

Estimated cost	$5,250 00
Amount expended	4,955 60
Balance	$294 40

LATERAL SEWER IN MONTFORD AVENUE SOUTH.

ORDINANCE OF ESTIMATES FOR THE YEAR 1904.

This sewer, consisting of a 24-inch terra cotta pipe, extends in Montford avenue from the sewer in Fayette street to Fairmount avenue, a distance of 477 feet. Inlets were constructed on the west side of Montford avenue at the two 10-foot alleys between Fayette streel and Fairmount avenue, and on the northwest and southwest corners of Montford avenue and Fairmount avenue. The depth of cut ran from 10 feet at Fayette street to 7 feet at Fairmount avenue.

Work was commenced on September 26, and completed on November 28, 1904.

STATEMENT SHOWING COST OF WORK.

Excavation, including timbering and refilling 491 cubic yards at $1	$ 491 00
470 lineal feet 24-inch D. S. terra cotta pipe at $1.30 (less 2 per cent. discount)	598 78
Laying pipe, including cement, sand and labor, 467 lineal feet at 20c	93 40
Inlets, connecting chambers and manholes	717 37
Hardware, hauling, etc	64 54
Consolidated Gas Co., moving lamp-post	5 55
Repaving over trench and intersection	263 19
Incidentals, such as building dams, pumping, cleaning up street, etc	105 94
Foreman	168 00
Total cost of work	$2,507 77

Charged to "Sundry Sewers" Appropriation of 1904.

Estimated cost	$2,600 00
Amount expended	2,507 77
Balance	$92 23

MONTFORD AVENUE SEWER.

ORDINANCE OF ESTIMATES FOR THE YEAR 1904.

This sewer, consisting of a 20-inch terra cotta pipe, extends in Montford avenue, from Gay street to Lafayette avenue,

connecting with the existing sewer at Gay street. Inlets were constructed on the northeast and southeast corners of Montford avenue and Lafayette avenue, The total length of this sewer is 350½ feet.

Work was commenced on December 1, and completed with the exception of the repaving, on December 31, 1904.

STATEMENT SHOWING COST OF WORK.

Excavation, including refilling, 275 cubic yards at 80c	$220 00
342 lineal feet 20-inch D. S. terra cotta pipe at 90c. (less 2 per cent. discount)	301 64
Laying pipe, including sand, cement and labor, 342 lineal feet at 18c	61 56
Inlets, connecting chambers and manholes	457 04
Hardware, tools and hauling	37 00
Incidentals	62 47
Foreman	108 00
Total cost of work	$1,247 71

Charged to "Sundry Sewers" Appropriation of 1904.

Estimated cost	$1,600 00
Amount expended	1,247 71
Balance	$352 29

SEWER IN LAWRENCE AND CLEMENT STREETS.

ORDINANCE OF ESTIMATES FOR THE YEAR 1904.

This sewer begins at the intersection of Fort avenue and Lawrence street, and extends in Lawrence street to Clement street; thence in Clement street to Boyle street; and thence on the property of Wm. D. Platt & Co. to the water front, a total distance of 1,294.29 feet.

Inlets were constructed at the southwest and northwest corners of Fort avenue and Lawrence street; on the east side of Lawrence street at Clement street; at the southeast and southwest corners of Clement and Boyle streets, and on the north side of Clement street at Boyle street.

The work was commenced on July 21, and completed December 14, 1904, with exception of a portion of the repaving over the sewer.

STATEMENT SHOWING COST OF WORK.

Excavation, including timbering and refilling, 1.109 cubic yards at $1.2793† per cubic yard	$1,407 32
337½ lineal feet of 30-inch D. S. terra cotta pipe at $2.5872 per lineal foot	873 18
310 lineal feet of 24-inch D. S. terra cotta pipe at $1 274 per lineal foot	394 94
496 lineal feet of 20-inch D. S. terra cotta pipe at $0.8820 per lineal foot	437 48
Laying pipe, including sand, cement, etc., 1,184.23 lineal feet at $0.2245 per lineal foot	265 87
Inlets, chambers, brick curves, etc	1,343 87
Incidentals, lumber, hardware, hauling, tools, etc	89 04
Removing gas pipe	4 04
Repaving over sewer	240 75
Foreman	383 00
Value of material left over and sent to storage yard	108 07
Total cost of work	$5,547 56

Charged to "Sundry Sewers" Appropriation of 1904.

Estimated cost	$7,400 00
Amount expended	5,547 56
Balance	$1,852 44

EXTENSION OF SEWER IN WEBSTER STREET.

ORDINANCE OF ESTIMATES FOR THE YEAR 1904.

This sewer extends in Webster street, from Clement street to Fort avenue, a distance of 536.62 feet. Inlets were constructed at the nortwest corner of Fort avenue and Webster street, and on the south side of Fort avenue at Webster street.

The work was commenced on October 22 and completed on December 13, 1904.

STATEMENT SHOWING COST OF WORK.

Excavation, including timber and refilling, 354 cubic yards at $1.2379 per cubic yard	$ 438 22
518 lineal feet 20-inch D. S. terra cotta pipe at $0 882 per lineal foot	456 88
Laying pipe, including cement, sand, etc, 531.62 lineal feet at $0.1266 per lineal foot	67 32
Inlets, manholes and chambers, etc	335 57
Incidentals, hardware, tools, etc	24 84

Watchman	8 79
Foreman	136 00
Value of material left over and sent to storage yard	1 76
Total cost of work	$1,469 38

Charged to "Sundry Sewers" Appropriation of 1904.

Estimated cost	$1,650 00
Amount expended	1,469 38
Balance	$180 62

SEWER IN BAKER STREET.

ORDINANCE OF ESTIMATES FOR 1904.

This sewer is an extension of the lateral to the main sewer in Baker street west of Fulton avenue, in Baker street from a point near the east side of Fulton avenue to the east side of Mount street, a total distance of 321.85 feet. Inlets were constructed at the southeast corner of Baker and Mount streets. A 10-inch pipe laid by the Baltimore Traction Company, and now used as a sewer pipe, was connected with this sewer.

The work was commenced on November 17, and completed, with the exception of the inlets at the northeast corner of Baker and Mount streets, and the repaving over the sewer, on December 31, 1904.

STATEMENT SHOWING COST OF WORK.

Excavation, including timbering and refilling, 260 cubic yards at $1.0156 per cubic yard	$264 06
316 lineal feet 20-inch D. S. terra cotta pipe at $0.882 per lineal foot	278 71
Laying pipe, including cement, sand, etc., 321.85 lineal feet at $0.1356 per lineal foot	43 66
Inlets, manholes and chambers, etc	351 37
Incidentals, lumber, hardware, tools, etc	25 76
Watchman	64 43
Foreman	158 00
Value of material left over and sent to storage yard	25 94
	$1,211 93

Charged to "Sundry Sewers" Appropriation of 1904.

Estimated cost	$1,550 00
Amount expended	1,211 93
Balance	$338 07

SEWER IN HICKORY AVENUE.

ORDINANCE OF ESTIMATES FOR THE YEAR 1904.

This sewer begins in Hickory avenue at a point south of Third avenue, and extends southward in Hickory avenue to a 10-foot alley, and thence westward in said 10-foot alley to an open stone culvert on the east side of the Falls road, a total distance of 369.07 feet. Inlets were constructed on the east and west sides of Hickory avenue at the head of the sewer.

The work was commenced on September 19, and completed on November 26, 1904.

STATEMENT SHOWING COST OF WORK.

Excavation, including timbering and refilling, 491 cubic yards at $0.951 per cubic yard	$	466 97
290 linear feet 24-inch D. S. terra cotta pipe at $1.3584 per linear foot		393 96
Laying pipe, including cement, sand, etc., 290 linear feet at $0.2256 per linear foot		65 44
Inlets, manholes, chambers, etc.		801 86
Incidentals, hardware, hauling, tools, etc.		59 13
Watchman		34 14
Foreman		196 50
Value of materials left over and sent to storage yard		84 08
Total cost of work	$	2,102 08

Charged to "Sundry Sewers" Appropriation of 1904.

Estimated cost	$	2,200 00
Amount expended		2,102 08
Balance	$	97 92

SEWER IN CARROLLTON AVENUE AND FRANKLIN STREET.

ORDINANCE NO. 153, APPROVED MAY 8, 1903.

This sewer is a lateral, connecting with the main sewer in Carey street at Franklin street; and extending thence in Franklin street to Carrollton avenue, and in Carrollton avenue to Edmondson avenue, a total distance of 874.61 feet.

Four lines of eight-inch drain pipes were encountered in the sewer trench on Franklin street, one of which had to be taken up and relaid for a distance of 110 feet after the 24-inch pipe was laid. The others were connected with the sewer where they turned out of Franklin street.

Inlets were constructed at the northeast corner of Franklin street and Carrollton avenue and at the northeast corner of Carrollton and Edmondson avenues.

The work was commenced on May 30, and completed on August 6, 1904.

STATEMENT SHOWING COST OF WORK.

Excavation, including timbering and refilling 850 cubic yards at $0.951 per cubic yard	$808 33
368 lineal feet 24-inch D. S. terra cotta pipe at $1.274 per lineal foot	468 83
418 lineal feet 18-inch D. S. terra cotta pipe at $0.6664 per lineal foot	278 56
Laying pipe, including cement, sand, etc., 831.41 lineal feet at $0.2377 per lineal foot	197 64
Inlets, manholes and chambers, etc	759 34
Incidentals, lumber, hauling, hardware, tools etc	165 40
Repaving over sewer	178 46
Watchman	57 60
Foreman	238 50
8-inch drain pipe relaid 110 feet	7 85
Value of material left over and sent to storage yard	7 64
Total cost of work	$3,168 15
Appropriation	$3,500 00
Amount expended	3,168 15
Balance	$331 85

SEWER IN EDMONDSON AVENUE AND WOODYEAR STREET.

ORDINANCE NO. 7, APPROVED OCTOBER 22, 1903.

This sewer is a lateral, connecting with the main sewer in Franklin street at Woodyear street, and extending in Woodyear street to Edmondson avenue, and thence in Edmondson

avenue to Carey street, a total distance of 678.75 feet. Inlets were constructed at the northeast and northwest corners of Edmondson avenue and Woodyear street, and at the northeast corner of Edmondson avenue and Carey street.

The work was commenced on March 28, and completed on July 1, 1904.

STATEMENT SHOWING COST OF WORK.

Excavation, including timbering and refilling, 644 cubic yards at $1.2015 per cubic yard	$773 83
438 lineal feet 24-inch D. S. terra cotta pipe, at $1.2739 per lineal foot	558 01
192 lineal feet 20-inch D. S. terra cotta pipe, at $0.8820 per lineal foot	169 34
Laying pipe, including sand, cement, etc., 636.48 lineal feet at $0.2882 per lineal foot	183 46
Inlets, manholes and chambers, etc	699 35
Incidentals, lumber, hardware, hauling, tools, etc	138 55
Removing gas pipes	10 05
Removing water pipes	25 05
Repaving over sewer	337 79
Watchman	41 17
Foreman	247 00
Value of material left over and sent to storage yard	1 91
Total cost of work	$3,185 51
Appropriation	$3,332 00
Amount expended	3,185 51
Balance	$146 49

SEWER IN LAURENS STREET AND PATTERSON AVENUE.

ORDINANCE NO. 2, APPROVED OCTOBER 12, 1903.

This sewer is a lateral, connecting with the main sewer in Druid Hill avenue at Laurens street, and extending in Laurens street to Pennsylvania avenue; and thence in Patterson avenue to Fremont avenue, a total distance of 1,334.11 feet.

Inlets were constructed at the following points, namely: northeast and northwest corners of Laurens and Division streets; northeast corner of Laurens street and Pennsylvania avenue; northwest corner Pennsylvania avenue and Patterson avenue, and northeast, northwest and southwest corners of Patterson and Fremont avenues.

The work was commenced on March 30, and completed August 5, 1904.

STATEMENT SHOWING COST OF WORK.

Excavation, including timbering and refillling, 1,600 cubic yards at $1.0287 per cubic yard	$1,645 94
850 lineal feet 30-inch D. S. terra cotta pipe at $2.5872 per lineal foot	2,199 12
455 lineal feet 27-inch D. S. terra cotta pipe, at $1.9991 per lineal foot	909 63
Laying pipe, including cement, sand, etc., 1,316.61 lineal feet at $0.1613 per lineal foot	212 45
Inlets, manholes, chambers, etc	1,725 90
Incidentals, lumber, hardware, hauling, tools, etc	292 33
Removing water pipes	118 30
Repaving over sewer	410 95
Foreman	408 50
Value of material left over and sent to storage yard	76 88
Total cost of work	$8,000 00
Appropriation	$8,000 00
Amount expended	$8,000 00

BOX SEWER AT LOMBARD AND PATUXENT STREETS.

Terra cotta pipe	$ 76 44
Lumber	216 55
Labor	137 81
Incidentals	20 77
	$451 57

Charged to Improvements in and Additions to Drainage System, 1904.

NEW INLETS TO EXISTING SEWERS.

Location.	Cost.
Northeast corner Washington and Lanvale streets	$ 205 25
Northwest corner Washington and Lanvale streets	250 80
Northeast corner Howard and Lee streets	183 01
Druid Hill avenue opposite Clendenin street	208 81
Northeast corner Howard and Wayne streets	177 08
Southeast corner Howard and Wayne streets	174 84
Northeast corner Madison and Buren streets	322 16
Southeast corner Madison and Buren streets	200 18
East side Biddle street bridge	217 49
North side Liberty road and Twelfth street	164 39
North side Clifton avenue near Twelfth street	163 49
North side Clifton avenue and Fifteenth street	111 41
South side Clifton avenue and Fifteenth street	112 31
South side Liberty road and Twelfth street	158 98
Clifton avenue, between Monroe and Payson streets	259 36
Northwest corner Holliday and Centre streets	148 47
Southwest corner Holliday and Centre streets	152 48
Northeast corner Franklin and Pulaski streets	517 12
Southeast corner Franklin and Pulaski streets	287 13
	$4,014 76

Charges:

Improvements in and Additions to Drainage System 1904.	$3,357 84
Repairs of Sewers 1904	656 92
	$4,014 76

RECONSTRUCTION AND REPAIR.

RECONSTRUCTION OF CENTRAL AVENUE SEWER.

The reconstruction of Central avenue sewer was resumed on March 26, 1904, at a point about 96 feet south of Lombard street, and continued for a distance of 146½ feet. The general character and condition of the old stone sections of this sewer have been fully described in previous reports of this Department. The inside dimensions of the old section, which was torn out and rebuilt during the present year, were as follows: Span of arch, 20 feet; rise of arch, 3 feet 6 inches;

height of side walls, 1 foot; total height at centre, 5 feet. The new section consists of an arch of brick masonry 18 inches in thickness, having a span of 14 feet 11 inches, supported by concrete skewbacks, and balanced and stiffened by a heavy backing of rubble masonry. The arch rests on side wall of brick masonry, 2 feet 6 inches in thickness and 1 foot 5 inches in height, built parallel to and in contact with the side walls of the old sewer, upon concrete foundations about 3 feet in width and 15 inches in depth, and a pavement or "invert" of vitrified brick, depressed 6 inches at the centre, was laid on a concrete foundation from 3 to 6 inches in depth. The total inside height of the new section at the centre is 5 feet. All of the stone used in the backing of the new arch was obtained from the old section. Work was suspended on May 26, 1904, as the old section north of Lombard street appears to be in a fairly good condition.

STATEMENT SHOWING COST OF WORK.

Removal of old arch and its covering of earth, excavations for foundations and refilling over new arch, 469 cubic yards at $1.30	$	609 70
Brick masonry, arch and side walls, including bricks, sand, cement and labor, 192 $\frac{5}{10}$ cubic yards at $8.40		1,617 00
Invert, vitrified brick, including bricks, sand, cement and labor, 242 $\frac{2}{10}$ square yards at $2		484 40
Stone masonry, including cement, sand and labor, 131 cubic yards at $3.86		505 66
Concrete foundations and skewbacks, including stone, cement, sand and labor, 79.5 cubic yards at $5.74		456 33
Hardware, tools, lumber, making and moving centre, pumping, etc		644 29
Water Department, moving pipe		22 89
Reparing old arch		82 84
Repaving over sewer		556 98
Foreman		233 00
Watchman		124 00
Taking down derrick and hauling to yard		68 75
Total cost of work	$	5,405 84

Charged to "Repairs of Sewers" appropriations of 1904.

RECONSTRUCTION OF SEWER IN MERRYMAN AVENUE.

This sewer consisting of a 30-inch terra cotta pipe, was constructed in Merryman avenue, from the York road to Barclay street, a distance of 550 feet, and connects with the Barclay street sewer. An inlet was constructed on the north side of Merryman avenue, east of Barclay street, and on the northwest corner of the York road and Merryman avenue. A chamber was constructed near the southwest corner of the same intersection, connecting the 20-inch terra cotta pipe, which lays on the west side of the York road south of Merryman avenue, and also the two 18-inch terra cotta pipes crossing the York road from the east. The old wooden box sewer, which laid on the south side of Merryman avenue, was torn out and the trench filled in to the grade of the street.

Work was commenced on August 8, and completed on September 17, 1904.

STATEMENT SHOWING COST OF WORK.

Excavation, including timbering and refilling, 612 cubic yards at 66c	$403 92
495 lineal feet 30-inch D. S. terra cotta pipe at $2.64 (less 2 per cent. discount)	1,280 66
Laying pipes, including cement, sand and labor, 512 lineal feet at 22c	112 64
Inlets, curve, manholes and chambers	424 59
Tearing out box drain and filling in trench	96 25
Lumber, hardware and hauling	76 92
Incidentals, such as pumping, etc	43 60
Foreman	181 00
Watchman	24 00
Value of materials sent to city yard	69 47
Total cost of work	$2,713 05

Charged to "Repairs of Sewers" appropriations of 1904.

RECONSTRUCTION OF CULVERT AT FEDERAL AND POTOMAC STREETS.

The old wooden box culvert across Federal street, at Potomac street, having rotted out and become dangerous, the same was removed and replaced by a 30-inch terra cotta pipe.

STATEMENT SHOWING COST OF WORK.

Terra cotta pipe	$278 12
Bricks	6 44
Cement	2 76
Labor, superintendence and incidentals	282 49
Total cost of work	$569 81

Charged to "Repairs of Sewers" appropriations of 1904.

CENTRE STREET SEWER.

The old worn out wooden floor of the sewer in Centre street, between Calvert and St. Paul streets, for a distance of 110 feet was removed and replaced by a pavement of granite blocks, laid in cement, and the side walls of the sewer were pointed and plastered with cement.

STATEMENT SHOWING COST OF WORK.

Granite blocks	$172 40
Sand	16 15
Cement	56 20
Labor, superintendence and incidentals	697 86
Total cost of work	$942 61
Charges:	
Repairs of Sewers, balance of appropriation for 1903	$214 92
Repairs of Sewers, appropriation 1904	727 69
	$942 61

LOVEGROVE ALLEY SEWER.

The wooden floor of the sewer in Lovegrove alley, between Twentieth and Twenty-first streets, was removed and replaced by a pavement of granite blocks, for a distance of 275 feet, and the side walls were pointed and plastered with cement.

STATEMENT SHOWING COST OF WORK.

Granite blocks	$270 03
Cement	93 58
Sand	18 70
Labor, superintendence and incidentals	1,030 19
Total cost of work	$1,412 50
Charges:	
Repairs of Sewers, balance of appropriation for 1903	$223 70
Repairs of Sewers, appropriation 1904	1,188 80
	$1,412 50

SEWER AT NORTH AVENUE AND CHESTER STREET.

The wooden floor of the sewer in the intersection of North avenue and Chester street, for a distance of 260 feet, and the wooden floor in the branch sewer in North avenue, for a distance of 50 feet, were cut out and replaced by a pavement of granite blocks laid in cement, and the side walls were pointed and plastered with cement.

STATEMENT SHOWING COST OF WORK.

Granite blocks	$457 40
Cement	158 69
Sand	31 45
Labor, superintendence and incidentals	1,438 59
Total cost of work	$2,086 13
Charges:	
Repairs of Sewers, balance of appropriation for 1903	$203 71
Repairs of Sewers, appropriation 1904	1,882 42
	$2,086 13

RECONSTRUCTION OF EXISTING INLETS.

Location.	Cost.
Northeast corner Milton Avenue and Preston Street	$286 45
Southeast corner Milton Avenue and Preston Steeet	239 15
Southwest corner Milton Avenue and Preston Street	211 20
Southeast corner Central Avenue and Gough Street	146 15

Location.	Cost.
Northeast corner Central Avenue and Gough Street.....	161 72
Northwest corner Central Avenue and Fawn Street.....	185 41
Southeast corner Central Avenue and Fawn Street.....	90 56
Southwest corner Central Avenue and Bank Street.....	130 86
Northwest corner Central Avenue and Cochran Alley.....	219 14
Southwest corner Central Avenue and Eastern Avenue.....	94 88
Northwest corner Central Avenue and Eastern Avenue.....	93 88
Northwest corner Fremont Avenue and Iceland Street.....	207 95
Southeast corner Holliday and Centre Streets.....	107 32
	$2,174 67

Charged to "Repairs of Sewers" appropriations of 1904.

INLET AND MINOR SEWER REPAIRS.

LOCATION OF WORK.

Northeast corner Fayette and High Streets.
Intersection Lombard and Liberty Streets.
Intersection Baltimore and Liberty Streets.
Southeast corner Charles and Balderston Streets.
Northwest corner Central Avenue and Eastern Avenue.
Southeast corner Low and Exeter Streets.
Northwest corner Baltimore and Howard Streets.
Southeast corner Boyd and Schroeder Streets.
Hillen Street, between Front and High Streets.
Northwest corner Hillen and Front Streets.
Southwest corner Central Avenue and Mullikin Street.
Northeast corner Howard and Lexington Streets.
Northeast corner Lancaster and Caroline Streets.
Southwest corner Howard and Lexington streets.
Intersection Mt. Royal avenue and Cathedral street.
Southeast corner Hoffman street and Shields' alley.
Northwest corner Morton alley and Eager street.
Southeast corner Orleans and Wolfe streets.
Southeast corner Lexington and Holliday streets.
Southeast corner Barre street and Spring alley.
Southeast corner Boyd and Schroeder streets.
North side Calvert street bridge.
Northeast corner Ridgely and Ostend streets.
Northeast corner Lancaster and Caroline streets.
Southwest corner Lakewood and Fairmount avenues.
Northeast corner Lexington and Holliday streets.

Northeast corner Camden and Howard streets.
In front of 1718 Division street.
Southeast corner Fulton avenue and Francis street.
Northeast corner Pennsylvania avenue and Gold streets.
Northwest corner Ridgely and Ostend streets.
Southwest corner Fairmount and Kenwood avenues.
Southwest corner Lakewood avenue and Orleans street.
Northwest corner Sharp and Pratt streets.
Northwest corner Central avenue and Baltimore street.
Southwest corner Fayette and Front streets.
Southwest corner Stricker and Pratt streets.
Southwest corner Calhoun and McHenry streets.
Southwest corner Yoad road and Merryman's lane.
Northwest corner Lexington and Howard streets.
Intersection Federal and Potomac streets.
Southwest corner Marion street and Park avenue.
North and south sides Lexington street, between Park avenue and Howard street.
Southwest corner Broadway and Lancaster street.
Northeast corner Broadway and Thames street.
Intersection Luzerne street and Foster avenue.
Southwest corner Lexington and Gay streets.
Southeast corner Low and Chestnut streets.
Southeast corner Low and Exeter streets.
Southwest corner Low and Front streets.
East side Lexington street bridge.
Carter alley, between Lanvale street and North avenue.
Southeast corner Charles and Balderston streets.
Southeast corner South and Pratt streets.
Southwest corner Pratt and Sharp streets.
Southeast corner Baltimore and Wolfe streets.
Northeast corner Lanvale and Charles streets.
Northwest corner Lanvale and Charles streets.
Rear of 119 North Bond street.
In front of 946 North Broadway.
Southeast corner Baltimore and Charles streets.
Preston street bridge.
In rear of 829 North Caroline street.
Southwest corner Howard and Lombard streets.
Northwest corner Lanvale and Charles streets.
Northwest corner Eager street and Morton alley.
Northeast corner Maryland and Mt. Royal avenues.
Southwest corner Oliver street and Sherman Place.

Southwest corner Lexington and Arch streets.
In front of 1155 North Central avenue.
In front of 820 Pennsylvania avenue.
Northeast corner Fremont and Pratt streets.
Northeast corner Howard and Lee streets.
Southwest corner Saratoga and Stricker streets.
Southwest corner Central avenue and Gough street.
Southeast corner Merryman's lane and Barclay street.
East and west sides Lombard street bridge.
In front of 127 North High street.
Northeast corner Fulton and Walbrook avenues.
Northwest corner Harford avenue and Forrest street.
Northeast corner Harford avenue and Forrest street.
Northeast corner Preston street and Milton avenue.
809 Hillen street (flow in cellar.)
Northeast corner Low street and Rogers avenue.
Southeast side Lexington street Bridge.
Southwest corner Calvert and Read streets.
Northwest corner Broadway and Thames street.
Southwest corner Broadway and Aliceanna street.
Northwest corner Eager and Charles streets.
Northeast side Lexington street Bridge.
East side Biddle street Bridge.
Intersection Central avenue and Granby street.
Northeast corner Harlem avenue and Calhoun street.
Northwest corner Harlem avenue and Calhoun street.
Southeast corner Calhoun and Lanvale streets.
Intersection Delwood and Conduit avenues.
Southeast corner Fourth avenue and Falls road.
Northeast corner Chase street and Hopkins avenue.
Northeast corner Wolfe and Preston streets.
Southeast corner Biddle street and Hopkins avenue.
Northeast corner Biddle street and Hopkins avenue.
Southeast corner Gay and Preston streets.
Southeast corner McDonough and Bond streets.
Cowpen alley, between Paca and Eutaw streets.
Northwest corner Gay and Preston streets.
Southwest corner Gay and Preston streets.
Northwest corner Gay and Wolfe streets.
Northeast corner Gay and Wolfe streets.
Southwest corner Wolfe and Oliver streets.
Northwest corner Wolfe and Oliver streets.
Northwest corner Wolfe and Federal streets.

Northwest corner Wolfe and Lanvale streets.
Southwest corner Caroline and Federal streets.
Northwest corner Caroline and Federal streets.
Northeast corner Monument and Buren streets.
North side Madison near Buren street.
South side Madison near Buren street.
Eastern avenue, between Central avenue and Eden street.
Southeast corner Hoffman street and Shields' alley.
Northeast corner Race and West streets.
Intersection Light and Balderston streets.
Frankin road and Baltimore and Potomac Railroad.
Southeast corner Hillen and Front streets.
Southeast corner Eutaw and Preston streets.
Southeast corner Park avenue and Preston street.
Southeast corner Preston street and Mason alley.
Remington avenue and Twenty-ninth street.
Northeast corner Eastern avenue and Eden street.
Northeast corner Washington and Bank streets.
Northwest corner Liberty and Lombard streets.
Northeast corner Chestnut and Low streets.
Northwest corner Central avenue and Cochran alley.
Northwest corner Frederick and Pratt streets.
Southeast corner Milton avenue and Hoffman streets.
Southwest corner Central avenue and Cochran alley.
Northwest corner Patterson Park avenue and Fayette street.
Northeast corner St. Paul and Centre streets.
Southwest corner Fulton avenue and Baker street.
2150 Boston street.
Southeast corner Fulton avenue and Baker street.
Northeast corner Pennsylvania avenue and Wilson street.
Northeast corner Preston street and Milton avenue.
Northeast corner Howard and Barre streets.
Southwest corner Penn and King streets.
Front of 2208 and 2210 Boston street.
Northeast corner Wolbrook und Fulton avenues.
Northwest corner Fulton avenue and Baker street.
Northeast corner Hoffman street and Shield's alley.
Northeast corner Lanvale and Charles streets.
Intersection Hoffman street and Wilmer alley.
Intersection North avenue, John street and Malster avenue.
Northwest corner Argyle avenue and Hoffman street.
Southwest corner Cross and Howard streets.
Northwest corner German and South streets.

Northwest corner Buren and Madison streets.
Northeast corner Broadway and Barnes streets.
Southeast corner Broadway and Barnes streets.
Southeast corner Myrtle avenue and Saratoga street.
Southwest corner Baltimore and South streets.
Harris Creek Sewer.
Intersection Chase and Luzerne streets.
Central avenue, north of Baltimore street.
Southwest corner Park avenue and Marion street.
Southwest corner Ensor and Monument streets.
Southeast corner Ensor and Monument streets.
Northeast corner Mulberry street and Hargrove alley.
B. & P. R. R. and Brice alley sewer.
Intersection Carrollton avenue and Franklin street.
Northeast corner Warner street and Burgundy alley.
Southwest corner Gilmor and Saratoga streets.
Northeast corner Dover and Howard streets.
Northeast corner Baltimore and Gilmor streets.
In front of 1725 Division street.
Intersection Scott and Ostend streets.
Intersection Stockholm and Wicomico streets.
Northeast corner Central avenue and Bank street.
Intersection Saratoga and Holliday streets.
Intersection Federal street and Loney's lane.
Southwest corner Fremont and Iceland streets.
Intersection Ridgely and Bayard streets.
Northeast corner Central and Eastern avenues.
Southeast corner Central avenue and Bank street.
Intersection St. Paul and 31st streets.
Jenkins run sewer.
Southwest corner Penn and Dover streets.
Northwest corner Penn and Dover streets.
Northwest corner Penn and Portland streets.
Northeast corner Central avenue and Watson street.
Northwest corner Myrtle avenue and Franklin street.
Southwest corner King and Penn streets.
Northwest corner Lee and Light streets.
Intersection Lakewood avenue and Monument street.
Northeast corner Arch and Lexington streets.
Southeast corner Eastern and Central avenues.
Southwest corner Light and Conway streets.
Rear of 206 Light street.
Northwest corner Hargrove alley and Twenty-first street.

Southwest corner Edmondson avenue and Pulaski street.
In front of 817 N. Central avenue.
Southeast corner Central avenue and Baltimore street.
Northeast corner Calvert and Twenty-first streets.
Southwest corner Baltimore street and Central avenue.
Northeast corner Fairmount and Central avenues.
Intersection Pratt street and Dawson alley.
Northeast corner Pratt street and Fremont avenue.
In front of 825 McKim street.
Northeast corner of Carey and Baltimore streets.
Intersection Calhoun and Rice streets.
Southwest corner Calhoun and Cairo streets.
Northwest corner Calhoun and Cairo streets.
Northeast corner Malster avenue and McMechen Street.
Southwest corner Conway and Light streets.
Alley alongside Stafford Hotel.
Northwest corner Central avenue and Jefferson street.
Intersection Waverly avenue and Barclay street.
Intersection Buren and Eager streets.
Southwest corner Central avenue and Jefferson street.
Northwest corner Jefferson and Eden streets.
Southeast corner Eden and McElderry streets.
Northwest corner Canton and Central avenues.
Northeast corner Canton and Central avenues.
Intersection Ramsay and Bentalou streets.
Northwest corner Greenmount and North avenues.
Intersection of Howard and Mulberry streets.
Intersection of Forrest and Eager streets.
Northeast corner Orleans street and Central avenue.
Northwest corner Orleans street and Central avenue.
Northeast corner Baltimore street and Central avenue.
Intersection Ensor and Biddle streets.
Northwest corner Gay and Mott streets.
Northwest corner Lexington street and Park avenue.
Northeast corner Barre street and Fremont avenue.
East side Carey street, opposite Ramsay street.
Southeast corner Fayette and High streets.
East side Falls road, opposite Union avenue.
Northeast corner Conduit avenue and Union avenue.
Intersection Hanover and Pratt streets.

Total cost of the above.....$ 6,875 57

Charges:	
Repairs of Sewers, balance of appropriation for 1903	218 08
Repairs of Sewers, appropriation for 1904	6,657 49
	$6,875 57
Number of inlets, etc., repaired	237
Average cost per inlet, etc	$29.01 1/10

All paving and repaving made necessary by the construction and repair of sewers and inlets during the year was done by forces of the Street Repair Division, under the direction of Mr. James A. Paige, Assistant City Engineer.

INLET MANHOLES.

LOCATION.	
Northeast corner Madison street and Morton alley	1
Southeast corner Madison street and Morton alley	1
Northeast corner Broadway and Bank street	2
Northwest corner Fairmount and Lakewood avenues	1
Northwest corner Lanvale and Washington streets	1
Northeast corner Lanvale and Washington streets	1
Southwest corner Lanvale and Wofe streets	1
Northwest corner Lanvale and Wolfe streets	1
Northeast corner Caroline and Federal streets	1
Southwest corner Druid Hill avenue and Clendenin street	1
Northeast corner North avenue and Smallwood street	1
Northwest corner North avenue and Smallwood street	1
Northeast corner Lexington and Chestnut streets	1
Northwest corner Lexington and Chestnut streets	1
Northeast corner Harford avenue and Forrest street	1
Northwest corner Harford avenue and Forrest street	1
Northeast corner Greenmount avenue and Monument street	1
Northeast corner Howard and Wayne streets	1
Southeast corner Howard and Wayne streets	1
Southeast corner Madison and Buren streets	1
Northeast corner Monument and Ensor streets	2
Northwest corner Monument and Ensor streets	2
Southwest corner Central and Eastern avenues	1
Northwest corner Central and Eastern avenues	1
Southeast corner Broadway and Bank street	1
Howard street near Barre street	1
Northeast corner Ensor and Mott streets	1

Southwest corner Twentieth street, between Oak street and Jefferson place 1
Northwest corner Twentieth street, between Oak street and Jefferson place 1
Southeast corner Twentieth street, between Oak street and Jefferson place 1
Northwest corner Milton avenue and Hoffman street 1
Northeast corner Milton avenue and Hoffman street 1
Ensor street opposite Mott street 1
Northwest corner Forrest and McElderry streets 1
Southwest corner Hoffman street and Milton avenue 1
Northwest corner Central avenue and Cochran alley 1
Northwest corner Friendsbury place and Baker street 1
Southwest corner Friendsbury place and Baker street 1
Southwest corner Forrest and McElderry streets 1
Northeast corner Gay and Mott streets 1
Southeast corner Ensor and East streets 1
Northwest corner Ensor and East streets 1
Northwest corner Hillen and East streets 1
Gay and Mott streets 1
Southeast corner Forrest and Low streets 2
Northeast corner Forrest and Low streets 1
Northwest corner Fulton avenue and Baker street 1
Southwest corner Fulton avenue and Baker street 1
Northwest corner Low and Aisquith streets 2
Northeast corner Front and Hillen streets 1
Northwest corner Front and Hillen streets 1
Northwest corner Presbury and Bruce streets 1
Southeast corner Hillen and East streets 1
Front street opposite East street 1
Southeast corner Front and East streets 1
Northeast corner Gay and East streets 2
Southeast corner Low and East streets 1
Northeast corner Forrest and McElderry streets 1
Northwest corner Central avenue and Madison street 2
Southwest corner Central avenue and Madison street 1
Northeast corner Central avenue and Madison street 1
Northeast corner Gay and Madison streets 1
Union avenue near Falls road 1
Northwest corner Central avenue and Monument street 1
Northeast corner Central avenue and McElderry street 2
Southwest corner Holliday and Centre streets 1
Northeast corner Holliday and Centre streets 1
Southeast corner Central avenue and Gough street 1

Southwest corner Central avenue and Gough street	1
Southwest corner Central avenue and Fawn street	1
Northwest corner Central avenue and Jefferson street	2
Northeast corner Central avenue and Jefferson street	1
Southwest corner Central avenue and Jefferson street	1
Northwest corner Central avenue and Orleans street	1
Southwest corner Central avenue and Orleans street	1
Northeast corner Central avenue and Orleans street	1
Southeast corner Central avenue and Orleans street	1
Northwest corner Eden and Monument streets	1
Northeast corner Eden and Monument streets	1
South side Monument street east of Eden street	1
North side Monument street east of Eden street	1
Northeast corner Eden and Madison streets	1
South side McElderry street east of Eden street	1
North side McElderry street east of Eden street	1
	93
Total cost of the above	$1,207 50

Charges :

Improvements in and additions to the Drainage System, appropriation 1904	$1,190 59
Repairs of Sewers, appropriation 1904	16 91
	$1,207 50

Number of manholes put in 93.
Average cost per manhole $12.98⅜.

Statement showing the total number of new inlets constructed, existing inlets reconstructed and trapped, old inlets repaired, inlets cleared of obstructions, and inlet manholes put in from May 1st., 1900 to December 31st., 1904:

New inlets to existing sewers	87
Inlets reconstructed and trapped	38
Old inlets repaired	1,305
Inlets cleared of obstructions	159
Inlet manholes	260

PRIVATE DRAINS REPAIRED.

Callow and Bolton avenues	$74 23
Morton alley between Twenty-fourth and Twenty-fifth streets	49 75
Cowpen alley between Paca and Eutaw streets	4 92
Fayette and Little Sharp streets	20 98
Baltimore and Arch streets	39 05
Mt. Royal avenue and Cathedral street	3 28

Completion of drain at Baltimore and Liberty streets	191 39
Cowpen alley, between Paca and Eutaw streets, (additional work)	4 92
No. 24 Engine House	21 72
Eastern avenue, east of Central avenue	141 95
German street, east of Arch street	62 99
	$615 18

Charges:	
Private Paving and Inspection	$472 27
Repairs of Sewers, appropriation of 1904	142 91
	$615 18

WORK IN BURNT DISTRICT.

On February 11, 1904, immediately after the fire, four gangs, aggregating 130 men, were organized and employed under the direction of the engineers of the Sewer Division in removing the debris of the fire from the streets, between South street and Jones' Falls. Three of these gangs were kept in service for one week and then discharged, and the remaining gang, numbering 30 men, was kept at work until March 4, three weeks longer.

The cost of this work was as follows:

Labor	$2,204 79	
Materials	29 80	
		$2,234 59
Repairs to sewer in Light street at Balderston street		57 06
		$2,291 65

Charged to Emergency Fire Fund.

CONSTRUCTION AND RECONSTRUCTION OF INLETS IN THE BURNT DISTRICT.

Sewer pipe in Calvert street, from German street to Lombard street:

Terra cotta pipe	$184 10
Bricks	19 57
Cement	18 16
Covering and drip stones	36 80
Manhole frames and covers	27 20
Sand	5 44
Labor, superintendence and incidentals	504 00
	$795 27

Charged to Grading, Paving, etc., Burnt District Fund.

NEW INLETS.

Northwest corner Light and Balderston streets	$196 40
Northwest corner Light and Lombard streets	257 21
Northwest corner Calvert and Lombard streets	240 81
Northeast corner Calvert and Lombard streets	203 56
Calvert street near Pratt street (manhole)	31 89
Northwest corner Baltimore and Charles streets	256 15
Northeast corner Baltimore and Charles streets	332 84
Northwest corner Charles and Lombard streets	173 68
Northeast corner Charles and Lombard streets	76 93
Southeast corner Marsh Market Space and Baltimore street	158 45
Southwest corner Marsh Market Space and Baltimore street	271 21
Northwest corner Baltimore and Harrison streets	99 46
Northeast corner Baltimore and Harrison streets	77 06
German and Charles streets (not finished)	223 25
Northwest corner Light and Pratt streets	249 88
Northeast corner Light and Pratt streets (not finished)	63 50
	$2,912 28

Charged to Grading, Paving, etc., Burnt District Fund.

CLOSING UP OLD INLETS, ETC.

Northwest corner Light and Balderston streets	$5 75
Northeast corner Light and Balderston streets	5 75
Northeast corner Light and Lombard streets	5 75
Southwest corner Light and Balderston streets	5 75
Southeast corner Light and Balderston streets	5 75
Northeast and northwest corners Calvert and Pratt streets	59 88
	$88 63

Charged to Grading, Paving, etc., Burnt District Fund.

The following statement gives the lengths, in miles, of the several kinds of storm-water sewers now in use in this city:

Brick sewers	28.63 miles.
Stone sewers	6.25 "
Concrete sewers	.55 "
Terra cotta pipe sewers	7.30 "
Cast-iron pipe sewers	2.90 "
	45.63 "

Respectfully submitted.

NEWTON M. GRAY,
Assistant City Engineer.

REPORT OF

J. A. PAIGE, ASSISTANT ENGINEER.

1904.

Department of Public Improvements,
Sub-Department of City Engineer.

City Engineer's Office,
Baltimore, February 8, 1905.

Mr. B. T. Fendall,
City Engineer.

Dear Sir—I have the following report to make of the work done in Sub-Division of your Department, which was under my charge during the year 1904.

This comprises the repair and maintenance of all roads, streets and alleys in the city, paved and unpaved, except those recently paved and yet under the contractor's guarantee.

The relaying with improved surface material those streets where the pavement was worn out or where it was decided to replace cobble with a better material.

The laying of flag and vitrified brick footways.

The construction and maintenance of terra-cotta pipe and wooden box waterways across the streets for surface drainage and the maintenance of cast iron gutter-plates over covered drains.

The paving and repaving over trenches made by parties laying private drain pipes and by corporations excavating for various subways.

The supervision of the repairs to paving made by the companies operating electric and steam railways and the maintenance and operation of the Department's property yard.

The work done in the Burnt District up to August 29th, when Mr. John S. Doyle, Assistant Engineer was put in charge of all Burnt District improvements.

A classification of the work done during the year is as follows:

Cobble pavement repaved	2,231,296	square feet.
Gneiss gutterstones relaid	125,088	lineal feet.
Belgian block pavement repaved	309,359	square feet.
Curb reset	73,506	lineal feet.
Flagstones reset	34,984	square feet.
Sheet asphalt pavement repaired	8,821	square yds.
New asphalt block pavement laid	1,755	"
Asphalt block pavement repaired	29,745	"
New vitrified brick pavement laid	1,682	square yds.
Vitrified brick pavement repaired	328	" "
Vitrified brick footways laid	3,259	" "
Cinders hauled	14,267	cart loads.
Street refuse hauled	21,920	" "
Gutter plates reset	460	square feet.
New cobble pavement paved	21,663	" "
New regulation gutter stone laid	1,030	lin. feet.
New hammer dressed gutter stones laid	33,928	" "
Concrete gutter stones laid	3,357	" "
Granolithic gutters repaired	734	" "
New gneiss curb set 4½ and 5 inches	1,770	" "
Concrete curb set	501	" "
New flagstones set	1,555	square feet.
Macadam pavement repaired	13,067	square yds.
New macadam pavement laid	6,546	" "
Terra cotta drain pipe laid	569	lin. feet.
Wooden drain boxes repaired	74	" "
New wooden drain boxes constructed	44	" "
Fencing repaired	1,776	" "
Ditches cleaned in suburban roads and streets	90,297	" "

The above embraces some other work done and not classified; such as filling in holes and washouts in unpaved streets, building a dam across Patuxent street, south of Lombard street, to produce a fill by sediment deposit, and other work of an unusual nature. The work of the Burnt District is not included in this statement.

The amount expended in the year was :

For repairs of roads, streets, etc.	$179,394 56
For paving and repaving cross streets	12,016 90
For footway crossings	5,916 41
For Footway crossings, balance of last year	254 21
For maintenance of property yard	1,499 31
For paving in front of city property	87 39
For paving in front of city property, balance of last year.	20 33
For salaries	5,746 76
For maintenance of bridges and culverts	67 69
For repairs of sewers	854 21
For livery and transportation	6 00
For emergency fire fund	17,106 69

For grading, paving, etc, burnt district fund	22,178 49
For sundry sewers	1,277 15
For sewer in Laurens street and Patterson avenue	412 03
For sewer in Carrollton avenue and Franklin street	180 85
For sewer in Edmondson avenue, Carey and Franklin sts.	337 79
For improvements and additions to drainage system	1 55
For incidentals	22 23
For private paving and inspection	18,795 19
Total	$266,175 74

There was purchased under existing contracts and in open market the following named material (not including purchases for the Burnt District):

Materials.	Quantity.	Cost
Asphalt blocks—		
3″x5″x12″ 60,146		
4″x5″x12″ 248,500		
4″x4″x12″ 14,754		
	323,400	$20,638 79
Belgian blocks	300	16 44
Vitrified paving blocks	220,364	5,088 87
Cobble stone—perches	5,499.03	10,665 04
Crushed stone—cubic yards (gneiss)	2,223.76	3,942 46
" " " (nigger head)	1,059.10	2,330 04
Curb stone (4½″) lineal feet	1,526.75	916 02
" " (5″) "	212.20	148 32
Covering stone for gutters and drain pipes		9 50
Cinders and quarry refuse		40 00
Cement—barrels	791.75	1,186 79
Coal—tons	12.00	52 00
Coke—bushels	1 00	50
Flagstones, square feet	1,554.80	466 42
Gutter stones, hammer dressed, lineal feet	33,050.10	8,262 73
" " regulation, lineal feet	1,390.16	417 06
Ice—pounds	3,186.00	9 57
Iron and steel		96 16
Lumber—feet (B. M.)	14,957 00	296 53
Paints, oil, waste, and other yard supplies		197 08
Sand—cubic yards	11,402.90	9,092 24
Stone dust—cubic yards	2,124.11	2,124 11
Tools of all kinds for street gangs and use in yard		452 07
Wagons	4	525 40
Terra cotta pipe—lineal feet	569	202 40
Total		$67,176 54

The different classes of labor employed during the year and the total days service of each class for the year is :

Foreman	2845	days
Pavers	10695	"
Rammers	5738	"
Cart drivers with horse and cart	6846	"
Laborers	26514	"
Wagon drivers (department wagons)	226	"
Steam engineers (road rollers)	29	"
Blacksmiths	330	"
Blacksmiths helper	201	"
Stone cutters	29	"
Carpenters	13	"
Cement workers	44	"
Watchmen	43	"
Inspectors	141	"

The larger part of the expenditures in this Division of the Department was for repairs to the cobblestone pavements.

If we take the total repair work done on Belgian Block, sheet Asphalt Block and Vitrified brick pavements, during the year, and pro-rate it through the total area of each kind of pavement, the cost of maintenance for these kinds of pavements for the whole area is as given below.

To make these figures of value, this comparison should be continued through a series of years.

Deductions for a few years would be very close for Belgian Block pavement, on account of its long life and from the fact that but a small area of belgian block pavement has been laid in the last five years, that is not under the Contractors guaranty.

For the other kinds of improved pavement the results will be more or less approximate. The Statement shows the expenditures on certain kinds of pavement repaired, the percentage of each kind of pavement repaired, the average cost per square yard repaired, and the cost per square yard prorated through the total area in the city.

Kind of Pavement.	Total amount expended.	Per cent. of total area repaired	Cost per sq. yd. for area repaved.	Total area in the City, sq. yds.	Average cost per sq. yd. for the total area.
Belgian block	$11,619.67	0.0421	0.3384 cts	816190	0.0142 cts.
Sheet asphalt.	20,810.73	0 0393	2.3595 "	224456	0.0927 "
Asphalt block	29,771.74	0.1067	1.0009 "	278782	0.1068 "
Vitrified brick	293.96	0.0037	0.8962 "	88770	0.0033 "
Total	$62,496.10				

It should be borne in mind that the above statement, taken for one year only, is misleading, especially so in the case of vitrified brick pavement repairs. In laying asphalt blocks on Chase street from Charles to St. Paul street, the vitrified brick pavement in the city was reduced by 1755 square yards. Had not this been done, and had the street been relaid with brick, the maintenance of brick pavement would have been about $3\frac{7}{10}$ cents per square yard for the whole area in the city for the year.

CONCRETE GUTTERS.

By your direction the experiment was made in the material yard, of constructing concrete gutter stones for the cobble paved streets, reinforced with steel rods.

Forms were made for making fifty lineal feet of gutter stones at one time and with the yard force, when not otherwise engaged, fifty feet were made on alternate days. The gutters were left in the forms forty-eight hours and in the yard about ten days before hauling to the street for use. At this age they were amply strong to bear transporting and ramming in place.

At present we have forms sufficient to make one hundred and fifty feet of gutter at one time. The gutters were made five feet long, ten inches wide and six inches deep and reinforced with three ¼ inch steel rods, two of which were imbedded one inch from the bottom and one inch from the sides, and one rod imbedded in the vertical central plane of the gutter and one inch below the top surface.

The rods were out five feet long, and one inch at each end were bent at right angles to the rod to provide against slipping.

These rods are necessary to stiffen the slab for purposes of hauling on the street. After being set in place the concrete is strong enough to stand any strain that may come on them without reinforcing.

The mix was 1-2½, and 5 Portland cement, washed sand, and 1-inch stone.

It was attempted to make the gutter stones without metal re-inforcement, but it was found they would not stand the rough handling between leaving the yard and being put in place in the street.

The cost of the labor and material in making these gutters was 12 cents per lineal foot, add to this 3 cents for hauling makes them stand 15 cents per foot delivered on the street, against 25 cents for Gneiss gutter stone.

Some concrete gutters were constructed in place against the kerb already set. They were similar in size, construction, and mix, to those above described, except no steel rods were used. They were laid on a rammed bed of cinders 3 inches thick, and were separated in 5 foot lengths by ¼-inch boards, which were removed before the concrete hardened, and the slots filled with sand. The cost, including excavation was 18 cents per lineal foot against about 29 cents for gneiss gutter stone.

A comparison of these concrete gutters with the regulation gneiss gutter stones which have been used for many years, shows certain advantages of each kind over the other.

The concrete gutters are superior to the gneiss stones in that they furnish a uniform and smooth flow line and give a much better appearance. The latter, however, can not be considered an important matter on cobble paved streets. They are cheaper than gneiss stones by about 10 cents per lineal foot.

For residence streets and those of light traffic, and on those streets where from the width or the absence of car tracks,

vehicles seldom turn to the kerb, the concrete gutters are especially suitable. In such streets they will meet every requirement of a gneiss stone, and in addition will give a smoother and better appearance than ordinary gutter stone and will be much cheaper. For macadam roads in the outlying part of the city where gutters are constructed, they are particularly suitable.

I imagine they would last as long as vitrified brick gutters in such cases, and the cost would be less than brick construction.

For narrow streets or those of heavy traffic, or streets of grades exceeding 4 per cent., concrete gutters are unsuitable.

From the drainage conditions in Baltimore, and the large amount of gritty substance carried in the gutters, concrete would soon cut away on streets of heavy grade and continual flow.

It is expected next year to put in a large amount of concrete gutter where the conditions are suitable.

Concrete gutters were put in at the following places this year. They are given here so that their location may be known and their condition noted hereafter :

Street.	From	To.	Length.	Remarks.
South side 24th	Maryland ave	Morton alley	149	Constructed in place.
South side 24th	Lovegrove alley	St. Paul st	185	" "
South side 24th	St. Paul st	Hargrove alley	124	" "
South side North ave	Payson st	Pulaski st	354	" "
North side 24th	Lovegrove alley	St. Paul st	60	Constructed in forms and afterwards set in place.
East side Abell	Franklin st	George st	90	" "
North side Woodward	Sterrett st	Scott st	140	" "
North and south sides Iceland	Fremont ave	Barre st	210	" "
North side Barre	Fremont ave	Little Greene st	410	" "
West side Monroe	Wilkins ave	Eagle st	150	" "
South side Eagle	Monroe st	Payson st	145	" "
Eutaw Place crossing	About 200 feet N. of Whitelock st.		40	" "
West side Washington	10 feet N. of N. B. L. Eastern ave.	90 feet northward	90	" "
South side Federal	West kerb line of Eden st.	130 feet eastward	130	" "
West side Eden	South kerb line Federal st.	90 feet southward	90	" "
South side Exeter	W. B. L. of Gay st	75 feet westward	75	" "
North side Exeter	W. B. L. of Gay st.	5 feet westward	5	" "
East side Broadway	60 ft. N. of N. B. L. Thames st.	70 feet northward	70	" "
North side Saratoga	20 ft. W. of W. B. L. Holliday st.	150 feet westward	150	" "
South side Fayette	52 ft. E. of E. B. L. High st.	170 feet eastward	170	" "
South side Oliver	W. B. L. Holbrook st	50 feet westward	50	" "

West side Register.....	75 ft. N. of N. B. L. Aliceanna st.	10 feet northward.....	10	Constructed in forms and afterwards set in place.
East side Washington.	125 ft. N. of N. B. L. North ave.	150 feet northward....	150	" "
Center of Scrabble alley.	40 ft. E. of E. B. L. St. Paul st	30 feet eastward.....	30	" "
Center of Scrabble alley.	20 ft. E. of E. B. L. Courtland st.	50 feet eastward	50	" "
South side Biddle.....	E. B. L. Hopkins av.	110 feet westward.....	110	" "
South side Biddle.....	150 ft. E. of E. B. L.	20 feet eastward.....	20	" "
South side Biddle.....	W. B. L. of Wolfe st.	100 feet westward.....	100	" "
Total.....			3357	

SHEET ASPHALT PAVEMENTS.

Repairs were made on all sheet asphalt streets in the city except those yet under the contractor's guaranty.

The work embraced, patches of all sizes from 502 square yards to 2 square feet in area.

By the contract with the Filbert Paving and Construction Company, all pieces of work of 100 square yards or more in area, are guaranteed for five years. Areas repaired of less than 100 square yards, are guaranteed for one year.

The necessary sketches were made while the work was being done and are on record for future reference in connection with this clause of the contract.

The cost of maintaining the entire area of sheet asphalt pavements during the year, was about 9 cents per square yard, as shown elsewhere.

STREET ASPHALT REPAIRS, 1904.

Street.	From.	To.	Sheet asphalt.	Slag block paving.	Slag block repaving.	Vitrified brick paving.	Cost.
Broadway	Canton ave	North ave	3,372.90	12.29	12.90	168 76	$8,581 97
Baltimore st	Broadway	Chesapeake st	493.70	1.22	4.03		1,171 64
Chase st	Broadway	Calvert st	358.24	6.80	3.14	1.26	853 89
Fayette st	Calvert st	Holliday st	302.49	101.57	6.72		1,168 97
Lexington st	Calvert st	Front st	516.18	328.64	13.40	1.88	2,257 89
Holliday st	Fayette st	Lexington st	76.89	82.16			487 63
North st	Fayette st	Lexington st	27.82	16.10	0.96		129 68
Howard st	Fifth ave	Richmond st	18.48		0.51		43 27
Fulton ave	Presstman st	Pennsylvania ave	42 10		0.12	13.33	143 90
Fifth ave	Linden ave	Howard st	202.24				461 36
Biddle st	Richmond st	Linden ave	124.86		1.79		305 91
Linden ave	Fifth ave	Biddle st	161.50				361 31
Mulberry st	Charles st	Howard st	101.77		4.60		242 88
Richmond st	Howard st	Biddle st	14 90				34 42
Camden lane	Camden st	Dover st	79.02				178 90
Hollins st	Carrollton ave	Poppleton st	823.33		10.46		1,880 78
Weyler st	Charles st	Light st	192.15		12.83		519 44
Cross st	Charles st	Light st	47.77				107 96
Montgomery st	Sharp st	Leadenhall st	59.80	0.28			134 94
Sewell st	Pennsylvania ave	Fremont ave	111.32				251 59
Patterson ave	Pennsylvania ave	Fremont ave	374.42	4.49	18.74		1,098 92
Calvert st	Read st	Mt. Royal ave	390 03	115.04			1,273 03
St. Paul st	North ave	Thirty-first st	54.92				136 65
Front st	Baltimore st	Gay st	164.60		5.39		386 79
Sharp st	Pratt st	Camden st	502.91	2.34	1.79		1,217 68
Camden st	Howard st	Hanover st	205.28		5.70		486 34
Total			8,819.62	670 93	103.08	185 23	$23,917 74

Slag block paving—236.61 square yards, at $4 05	$ 958 27	
Slag block paving—434.32 square yards, at $3 25	1,411 54	
Slag block repaving—103 08 square yards, at $2 30	237 08	
Vitrified brick paving (gutters)—185.23 square yards, at $2 70	500 12	
		3,107 01
Total amount expended for sheet asphalt repairs		$20,810 73

REPAIRS AND RENEWALS OF STREETS PAVED WITH ASPHALT BLOCKS.

The streets paved with asphalt blocks were found to be much worn and damaged over large areas of surface and extensive repairs to the same have been made. Where it was possible to take out a limited section of defective pavement and to patch the same, it was done, such new blocks being used as were necessary to take the place of those unfit for further service. Where the surface of any portion of a street was so disintegrated as to make such patching impossible, the renewal was made by taking up the pavement and entirely relaying from kerb to kerb all the old blocks suitable and supplying the necessary amount of new blocks, the latter laid altogether.

In the following description of the work done on the several streets the term "new work" denotes those portions which were thus laid with new blocks from kerb to kerb. All the new blocks were purchased from the Maryland Pavement Company, the size most extensively used being 4″x5″x12″, and laid upon the 5″xr2″ face. A smaller number having dimensions 3″x5″x12″ was also used, laid in like manner upon the face 5″x12″, and a still smaller number of dimensions 4″x4″x12″. Stone dust was used almost exclusively for bedding the blocks and for filling the interstices between them. A comparatively small amount of sand was used on Lafayette avenue and on Eutaw Place, where a deep bed was necessary in order to raise the crown of the street to the proper height. In two places a foundation of concrete was substituted for the bed of stone dust, and in these cases a grout of cement and stone dust was used instead of the stone dust for filling the interstices, as is hereafter described.

New vitrified brick gutters were laid upon concrete in places where the existing granolithic gutters were worn out, and in one place, where from the condition of drainage, it was deemed advisable. These appear in detail in the following descriptions.

On all streets occupied by the tracks of the United Railways the space lying alongside the rails and extending two feet outward from the same was by agreement paved by this Department, but the expense thereof was charged against the United Railways and Electric Co., and a bill for the same was rendered them. In like manner all areas paved over trenches of the Chesapeake & Potomac Telephone Co. and of the Consolidated Gas Co. were measured, and bills for the expense thereof were rendered these companies.

A detailed statement of the work follows:

Saratoga street, between Charles and Paca streets:

The asphalt block pavement on that part of Saratoga street lying between Howard street and Tyson alley was taken up and replaced by a new pavement consisting of slag blocks laid between the rails of the United Railways track and two feet on each side of same, and of new asphalt blocks laid upon the remaining area. The slag blocks used were 4″x4″x8″ in dimension and the asphalt blocks 4″x5″x12″, the latter being laid with the face 5″x12″ uppermost. The whole pavement was supported by a concrete foundation four inches in thickness, and the blocks were set in a mortar bed one half an inch thick, composed of one part of cement and two parts of fine stone dust. As soon as the blocks were laid, and before the cement of the bed had had time to set, all the interstices were grouted with a thin grout, composed of one part of cement and one part of stone dust. The entire cost of labor and material for the portion laid with slag blocks was borne by the railway company, and a bill was rendered to them for the same, the work being done by this department.

The itemized cost is as follows:

Asphalt blocks (4″x5″x12″), 10,460, at $65 per M	$679 90
Slag blocks (4″x4″x8″), 9,501, at $48 per M	456 05
Cement, 556 bags	196 16
Crushed stone, 79.6 cu. yds., at $1.69	134 52
Gravel, 26 cu. yds., at $0.40	10 40
Stone dust, 47.5 cu. yds., at $1	47 50
Labor	548 23
Total	$2,072 76

The area covered by the slag blocks is 215 square yards.

The cost of this portion is $713.67, or $3.32 per square yard.

The remaining area is 567 square yards; the cost of this portion $1,359.09, or $2.40 per square yard.

The bill presented to the railway company for their part of the above, with an additional item for the use of tools, was $772.33. The remainder, $1,300 43, represents the cost to the city of this improvement.

Much difficulty was experienced in the carrying out of this work, by reason of the constant passing of the cars of the United Railways. This resulted in a somewhat higher cost per square yard than would otherwise have been the case.

In addition to the above, patching and repaving was done in various places on Saratoga street, between Charles and Paca streets.

The itemized statement follows:

New asphalt blocks (4″x5″x12″), 3,810, at $0.06½		$247 65
Vitrified brick for gutters, 330, at $0.0255		8 67
Labor		453 00
Stone dust, 61.3 cubic yards, at $1.00		61 30
Total		$770 62
Area of Asphalt Block work, 1,038 sq. yds.		
Blocks		$0.238
Stone dust		0.059
Labor		0.434
Total		$0.731
Area of Vitrified Brick gutters, 703 sq. yds.		
Bricks		$1.240
Stone dust		0.059
Labor		0.434
Total		$1.733
Total cost of work		$770 62
Bill rendered United Railways Co.	$125 05	
Bill rendered Chesapeake and Potomac Tel. Co.	48 18	
		173 23
Balance		$597 39

St. Paul street, from Monument street to North avenue:

Asphalt blocks (4″x5″x12″), 8,236, at $0.6½	$535 34
Stone dust, 81.5 cubic yds., at $1 00	81 50
Labor	398 52
Total	$1,015 36
Area of new work, 359 sq. yds.	
Blocks	$1.330
Stone dust	0.063
Labor	0.190
Total	$1 583
Area of old work, 925 sq. yds.	
Blocks	$0.061
Stone dust	0.063
Labor	0.360
Total	$0.484

The new work consists of a portion running from the north side of Mt. Vernon Place 101 feet northward.

A bill was rendered to the Consolidated Gas Company of $75.20.

This deducted from $1,015.36 leaves $940 16, representing the cost to the city.

Charles street, between Madison and Chase streets:

Asphalt blocks (3″x5″x12″), 1,775, at $0.06	$106 50
Asphalt blocks (4″x5″x12″), 1,055, at $0.06½	68 57
Stone dust, 17 cu. yds., at $1.00	17 00
Labor	171 29
Total	$363 36
Area of new work, 140 sq. yds.	
Blocks	$1.250
Stone dust	0.044
Labor	0.300
Total	$1.594
Area of old work, 246 sq. yds.	
Stone dust	$0.044
Labor	0.528
Total	$0.572

The new work consists of a portion on the east side, between the kerb and the tracks of the United Railways, running south of Chase street 63 feet, and of two portions on the east side, between kerb and tracks, a short distance north of Eager street, 38 feet and 14 feet long, respectively. A bill was rendered to the United Railways of $49.75. This deducted from $363.36 leaves $313.61, representing the cost to the city.

Pearl street, between Lexington and Saratoga streets:

Asphalt blocks (4″x5″x12″) 3,140, at $0.06½	$204 10
Stone dust, 77.4 cu. yds , at $1 00	77 40
Labor	392 50
Total	$674 00
Area of new work, 155 sq. yds.	
Blocks	$1.32
Stone dust	0.07
Labor.	0.23
Total	$1.62
Area of old work, 958 sq. yds.	
Stone dust	$0.07
Labor	0.37
Total	$0.44

The new work consists of one portion, extending from the north rail of the tracks of the United Railways on Saratoga street northward 40 feet.

Lexington street, between Pearl street and Fulton avenue:

Asphalt blocks (4″x5″x12″) 7,400, at $0.06½	$481 00
Stone dust, 55.2 cu. yds., at $1	55 20
Vitrified bricks, 1,300, at $25.50 per M	33 15
Labor	310 11
Total	$879 46

Area new asphalt block work, 361 sq. yds.
Area old asphalt block work, 531 sq. yds.
Area vitrified brick work, 29 sq. yds.

	Per Square Yard.		
	New Asphalt Blocks.	Old Asphalt Blocks.	Vitrified Bricks.
Bricks or blocks	$1.33	.....	$1.143
Stone dust	0.06	$0.060	0.060
Labor	0.23	0.407	0.407
	$1.62	$0.467	$1.610

The new asphalt block work consists of the intersection of Mount and Lexington streets 61 feet long, and a portion near the intersection of Bruce street 30 feet in length.

McCulloh street, from Biddle to Lanvale street:

Asphalt blocks (3″x5″x12″), 500, at $0.06	$30.00
Stone dust, 9 cubic yds., at $1.00	9 00
Labor	95.30
Total	$134.30
Area of old work, 207 sq. yds.	
Blocks	$0.145
Stone dust	0.044
Labor	0.460
Total	$0.649

Eutaw street, between Dolphin street and North avenue:

Asphalt blocks (4″x5″x12″), 52,190, at $0.06½	$3,392.35
Asphalt blocks (4″x4″x12″), 11,874, at $0.06	712.44
Stone dust, 631.4 cubic yds., at $1.00	631.40
Sand, 145.0 cubic yds., at $0.83	120.35
Screened sand, 39.0 cubic yds., at $0.98	38.22
Labor	2,280.95
Total	$7,175.71
Area of new work, 3,026 sq. yds.	
Blocks	$1.356
Stone dust and sand	0.0846
Labor	0.1800
Total	$1.6206
Area of old work, 6,312 sq. yds.	
Stone dust and sand	$0 0846
Labor	0.2750
Total	$0.3596

The location of the several pieces of new work is as follows:

East side, from Robert street, 180 ft. south	560	sq. yds.
West side, intersection Wilson street, and from Wilson street 210 ft. south	856.6	"
East side, from McMechen street, 76 ft. south	236.5	"
West from Lafayette avenue, 173 ft. north	538.2	"
East from 100 ft. north of Lanvale street, 75 ft. north	234.3	"
West from 150 ft. north of Lanvale street, 46 ft. north	143.0	"
East from 25 ft. south of Lanvale street, 77 ft. south	239.6	"
West from Lanvale street, 70 ft. south	217 8	"
	3,026.0	sq. yds.

Lafayette avenue, between Linden avenue and Fulton avenue:

Asphalt blocks (3″x5″x12″), 21,630, at $0.06	$1,297.80
Asphalt blocks (4″x5″x12″), 12,750, at $0.06½	828.75
Asphalt blocks (4″x4″x12″), 1,000, at $0.06	60.00
Stone dust, 307 cu. yds., at $1.00	307.00
Sand, 149 cu. yds., at $0.83	123.67
Labor	1,435.92
Total	$4,053.14

VITRIFIED BRICK GUTTERS.

Vitrified bricks, 4,100, at $25.50 per M	$104 55
Vitrified bricks, 1,000, at $29.00 per M	29 00
Cement, 82 bags	33.41
Sand and stone dust, 20.5 cu. yds.	18.80
Crushed stone, 9.2 cu. yds., at $1.69	15.55
Labor	56.00
Total	$257.31

SETTING OF STONE GUTTERS AT MORRIS ALLEY INTERSECTION.

Cement, 16 bags	$ 7.24
Sand, 3 cu. yds., at $0.83	2.49
Crushed stone, 4.8 cu. yds., $1.69	8.11
Labor	34.58
Total	$52.42

Area new asphalt block work, 1,710 sq. yds.
Area old asphalt block work, 3,480 cu. yds.
Area vitrified brick gutters, 115 sq. yds.

	Cost Per Square Yard		
	New Asphalt Block.	Old Asphalt Block.	Vitrified Brick.
Bricks or blocks	$1.244	$0.017	$1.161
Sand and stone dust	0.083	0.083	.....
Labor	0.203	0.313	0.487
Cement, sand stone dust and crushed stone	.....	.....	0.589
	$1.530	$0.413	$2.237

The location and extent of the several pieces of new asphalt block work is as follows:

Intersection of Morris alley, 23 feet long	95	sq. yds.
Intersection of Druid Hill avenue, and from Druid Hill avenue 100 feet westward	517.4	"
From Arlington avenue 60 feet westward	243.6	"
From Parrish alley 33 feet eastward	136.0	"
From west rail of United Railways on Gilmor st. 180 feet westward	718.0	"
Total	1710.0	"

The location and extent of the vitrified brick gutters is as follows:

North and south sides, between Gilmor street and Vincent alley	48	sq. yds.
North side, between Parrish alley and 10-foot alley, 70 ft. eastward; also, gutters in intersection of Parrish alley and 10-foot alley, 70 feet eastward, and of Norris alley	38	"
North side, across intersection of Etting street	10	"
Small repairs in various places	19	"
Total	115	"

These gutters are all laid to take the place of granolithic gutters which were worn out.

The stone gutters which were set at the intersection of Morris alley were 3 feet open stone gutters, and were brought

from the intersection of Pennsylvania avenue and Laurens street. The construction of inlets by the Sewer Department at the last-named place had made the gutters unnecessary, about 90 linear feet were taken up; 53 feet were used at the intersection of Morris alley; the remaining 37 feet were used to repair the existing open stone gutters of like dimensions at various places throughout the city.

Total cost of work	$4,362 87
Deduct bill to United Railways Company	48 09
	$4,314 78

Fulton avenue, from Lexington street to Baker street:

Asphalt blocks (4″x5″x12″), 131,475, at $0.06½	$8,545.87
Asphalt blocks (4″x4″x12″), 1,880, at $0.06	112.80
Stone dust, 380 cubic yds, at $1.00	380.00
Labor	2,420.45
Total	$11,459.12

VITRIFIED BRICK GUTTERS

Vitrified bricks, 3,600, at $25.50 per M	$91.80
Cement, 57 bags, at $0.46	26.22
Stone dust, 8.8 cubic yds., at $1.00	8.80
Crushed stone, 7.6 cubic yds	13.82
Labor	48.50
Total	$189.14

That portion of the street extending from the north rail of the tracks of the United Railways on Saratoga street northward to a point 33 feet north of the north building line of Franklin street, a distance of 729 feet, was laid with new blocks throughout, the existing blocks being entirely worn out and unfit for further service; also the portion extending from the south rail of the tracks of the United Railways on Edmondson avenue 129 feet southward, was laid with new blocks. These two portions taken together comprise an area of over 3,761.5 square yards.

The cost per square yard is as follows:

New blocks	$1.333
Stone dust	0.044
Labor	0.180
Total	$1.557

The remaining areas of new work are included between the limits, Lanvale street on the south and Presstman street on the north, and are all situated between the curb line and the tracks of the United Railways. Their location and extent are as follows:

East side, from Lanvale street north, 170 ft	309.5	sq. yds.
West side, between Lanvale street and Lafayette avenue, 392 ft	685.0	"
West side, between Winchester street and Patterson avenue, 382 ft	722.0	"
East side, intersection of Lorman street and between Lorman and Presstman streets, 426 ft	757.0	"
Total	2,473.5	sq. yds.

The cost per square yard is as follows:

New blocks	$1.333
Stone dust	0.043
Labor	0 240
Total	$1.616

It will be seen that the cost of labor is $0.06 greater than for the section between Saratoga street and Edmondson avenue.

This is due to the greater difficulty of laying in the narrow space between curb and track and also to the greater amount of cutting and fitting at the ends of the rows in proportion to the total area occupied. The total area of old work is 2,634 square yards.

The cost per square yard is as follows:

New blocks	$0.131
Stone dust	0.042
Labor	0 437
Total	$0 610

A vitrified brick gutter was laid on concrete on the east side between Lorman street and Presstman street and across the intersection of Lorman street, the gradient between between these points being so light that water constantly accumulated near the curb and spread over the street. The area was 63 square yards. A vitrified brick gutter on concrete was also laid across the intersection of Harlem avenue on the east side, the area being 18 square yards. The area of brick gutter was, therefore, 81 square yards.

The cost per square yard is as follows:

Bricks	$1.134
Cement, stone, etc	0.603
Labor	0.598
Total	$2.335

A bill was rendered to the United Railways of	$585 67
A bill was rendered to the Consolidated Gas Company of	11 37
Total	$597 04

Total cost of work	$11,648 26
Less amount for bills rendered	597 04
Cost to city	$11,051 22

Calhoun street, from Edmondson avenue to Harlem avenue:

Asphalt block (4″x5″x12″) 17,640 at $0 6½	$1,146 60
Stone dust 56 cu. yds. at $1.00	56 00
Labor	186 20
Total	$1,388 80

Area new work, 861 sq. yds.

Blocks	$1.332
Stone dust	0.065
Labor	0.216
Total cost per sq. yd	$1,613

The following is a summary of the foregoing descriptions and exhibits the total cost of asphalt block rapairs during the year:

Street.	New Asphalt Block Area.	Old Asphalt Block Area.	New Slag Block.	Vitrified Brick Gutter.	Amount Expended
Saratoga	567	1,038	215	7	$2,843 38
St. Paul	359	925			1,015 36
Charles	140	246			363 36
Pearl	155	958			674 00
Lexington	361	531		29	879 46
McCulloh		207			134 30
Eutaw	3,026	6,312			7,175 71
Lafayette	1,710	3,480		115	4,362 78
Fulton	6,235	2,634			11,648 26
Calhoun	861			81	1,388 80
	13,414	16,331	215	232	$30,485 41

Deducting from $30.485.41, $713.67, the cost of slag block work on Saratoga street, there remains $29,771.74 the total cost of asphalt block repairs.

The total of bills to the United Railways is	$1,580 89
The total of bills to the Consolidated Gas Campany is	86 57
The total of bills to the Chesapeake and Potomac Telephone Company is	48 18
Total	$1,715 64

This must be deducted from $30,485.41, since the bills to United Railways include bill for slag block work between the rails.

Total cost	$30,485 41
Deduction	1,715 64
Cost to city	$28,769 77

The old asphalt blocks considered unfit for further service were sold, the total revenue from this source being $1,800.01.

STREETS NEWLY LAID WITH ASPHALT BLOCK PAVEMENT.

Chase street, between Charles and St. Paul streets:

The old vitrified brick pavement on Chase street, between Charles and St. Paul streets, which had been in use for about

twelve years, and which was almost entirely disintegrated, was taken up and a new pavement of asphalt blocks was laid in its place, resting upon a concrete base four inches in thickness. The blocks were 3″x5″x12″ in dimensions, and were placed with the face 5″x12″ uppermost. They were laid directly upon a mortar bed intervening between their lower surfaces and the concrete base. This bed was one-half inch in thickness, and was composed of one part of cement and two parts of fine stone dust.

As soon as the blocks were laid, and before the cement of the bed had time to harden, all the interstices between the blocks were grouted with a thin grout composed of one part of cement and one part of stone dust, thus thoroughly filling and consolidating the whole.

The itemized cost is as follows:

New asphalt blocks (3″x5″x12″), 36,000, at $0.06	$2,160 00
Crushed stone (2-inch), 49 cu. yds.	98 00
Crushed stone (1-inch), 145 cu. yds.	317 70
Sand, 45 cu. yds., at $0 73	32 85
Stone dust, 91.8 cu. yds., at $1	91 80
Cement, 979 bags	361 01
Labor.	830 22
Total	$3,891 58

There was but little sand used, as a large quantity of sand of good quality was taken out of the old bed of the street when excavating for the concrete bed.

Total area, 1,755 sq. yds.

Labor.	$0.473
Material	1.743
Total	$2.216

COMPARATIVE COST OF ASPHALT BLOCK PAVING AND REPAIRING.

DESIGNATION.	1901.	1902.	1903.	1904.
Square yards paved (new work)	5,675	8,401	6,475	1,3414
Expended for labor (new work)	$1,219.50	$1,618.27	$1,319.41	$2.646.38
Expended for material (new work)	$9,524.05	$12,125.38	$9,031.20	$18,028.94
Cost of labor per square yard (new work)	0.21	0.19	0.21	0.21
Cost of material per square yard (new work)	1.67	1.44	1.39	1.40
Total cost per square yard (new work)	1.88	1.63	1.60	1.61
Square yards repaved (repairs)	4,817	8,914	7,666	1,6331
Expended for labor (repairs)	$1,799 94	$2,975.53	$2.984.21	$5,636.94
Expended for material (repairs)	$264.70	$650.42	$503 47	$2,100.39
Cost of labor per square yard (repairs)	0.37	0.33	0.39	0.35
Cost of material per square yard (repairs)	0.06	0.07	0.06	0.13
Total cost per square yard (repairs)	0.43	0.40	0.45	0 48

ASPHALT BLOCK PAVEMENT RENEWED ON CONCRETE BASE.

Square yards paved (new work)				567
Expended for labor (new work)				$397.47
Expended for material (new work)				$961.62
Cost of labor per square yard (new work)				0.70
Cost of material per square yard (new work)				1.70
Total cost per square yard (new work)				2.40

STREETS NEWLY LAID WITH VITRIFIED BRICK PAVEMENTS AND REPAIRS TO VITRIFIED BRICK PAVEMENTS.

Three new areas of vitrified brick pavements have been laid, the extent and cost of which are as follows:

Locality.	Square Yards.	Cost.	Cost per Square Yard.
Dover street, between Hanover and Cypress alley	584	$ 910 62	$1 56
Lovegrove alley, between Eager and Chase streets	653	1,300 23	1 99
Hargrove alley, between Chase and Biddle streets	445	1,007 53	2 26

Minor repairs to vitrified brick pavements were made upon Dover street, Chase street, St. Paul street and Walbrook avenue. The total number of square yards repaired was 328; the cost was $293.96.

See detailed description elsewhere.

Dover street, between Hanover street and Cypress alley:

The sheet asphalt pavement on Dover street, between Hanover street and Cypress alley, was entirely worn out, very little of the asphalt surface remaining. The underlying concrete base was cleared of the disintegrated covering, filled up and resurfaced where necessary with concrete and upon a mortar bed one-half an inch thick, composed of one part cement and two parts stone dust, was laid a new pavement of vitrified bricks.

After the bricks had been laid and before the cement of the bed had hardened, the interstices were filled with a grout composed of one part cement and one part stone dust.

The itemized statement of cost is as follows:

Vitrified bricks, 26,600, at $21.00 per M	$558 60
Cement, 175 bags	65 85
Crushed stone, 9.4 cu. yds., at $1.69	15 89
Sand, 7 cu. yds., at $0.82½	5 78
Stone dust, 25 cu. yds., at $1.00	25 00
Labor	239 50
Total	$910 62

The area was 584 sq. yds., giving a cost per sq. yd. of $1.56.

Lovegrove alley, between Eager and Chase street:

Of the bricks taken up in the paving of Chase street with asphalt blocks, all those which were in a fairly good condition, were used to pave Lovegrove alley. The portion thus paved extends from the south building line of Chase street southward 193 feet. The remaining portion extending to Eager street, a distance of 247 feet, was paved with new vitrified bricks, the cost of the bricks, in the area bordering the property, but not of the laying of the same, being borne by the abutting property holders. Both the old and the new bricks were laid upon a concrete base four inches in thickness. The bricks were laid on a mortar bed one-half inch thick composed of one part cement and two parts of fine stone dust.

Immediately after the bricks were laid and before the cement of the bed had set, they were grouted with a thin grout of one part cement and of one part of stone dust, thus filling and consolidating the whole.

The itemized cost is as follows:

New vitrified bricks, 15,330, at $25.50 per 1,000	$ 390 91
Cement 325 bags	114 21
Crushed stone (1 inch), 47.7 cu. yds., at $2 00	95 40
Crushed stone (2 inch), 20.4 cubic yards, at $2.25	45 90
Sand, 32 cubic yards, at 0.83	26 56
Sand, 24 cubic yards, at 0.73	17 52
Stone dust, 20 cubic yards, at $1	20 00
New curb, 120 lineal feet, at 0.60	72 00
Labor	517 73
Total	$1,300 23

Area covered by old bricks, 312.4 square yards, per square yard	1.393
Area covered by new bricks, 340.6 square yards, per square yard	2.54

Total cost	$1,300 23
Bill to property holders	377 91
Cost to the city	$ 922 32

Hargrove alley, between Chase and Biddle streets :

The cobble stone pavement was taken up and a new vitrified brick pavement laid in its place, resting upon a concrete foundation four inches in thickness. The cost of the new vitrified bricks in the area abutting the property, but not of the laying of the same, was borne by the property holders as in the case of Lovegrove alley, between Eager and Chase streets; and all other details of the work were performed as stated in the preceding description for Lovegrove alley.

The itemized cost is as follows:

New vitrified bricks, 20,030, at $23.00 per M	$460 69
Cement, 164 bags	57 45
Crushed stone, 45 cu. yds., at $2.00	90 00
Sand, 18 cu. yds., at $0.73	13 14
Stone dust, 18 cu. yds., at $1.00	18 00
Labor	355 55
Hauling, 5,080 bricks, at $2.50	12 70
Total	$1,007 53

Area, 445 sq. yds., per sq. yd	$2.264

Total cost	$1,007 53
Paid by abutting property holders	487 05
Cost to the city	$ 520 48

Cost per sq. yd. to city	$1 17

Minor repairs to vitrified brick pavements were also made as follows :

On Chase street, between Charles street and Maryland avenue:

Labor	$3 41
Stone dust	50
Total	$3 91
Area, 17 sq. yds., per sq. yd	$0 23

This area was repaved over a trench of the Consolidated Gas Company, and a bill was rendered to it for the amount.

On St. Paul street, between Biddle and Preston streets:

Labor	$37 37
New vitrified bricks	54 19
Stone dust	4 80
Total	$96 36
Area 83 sq. yds.	
Labor, per sq. yd	$0.45
Material, per sq. yd	0.71
Total	$1.16

On Walbrook avenue, between McKean and Monroe streets:

Labor	$59 65
Vitrified bricks	10 97
Cement, sand, crushed stone and stone dust	26 55
Total	$97 17
Area, 113 sq. yd	
Labor, per sq. yd	$0.53
Material, per sq. yd	0.33
Total	$0.86

This area was paved over trenches of the Consolidated Gas Company, and a bill was rendered to it for the whole amount.

On Dover street, between Cypress alley and Sharp street:

Vitrified bricks, 1,400 at $21.00 per M	$29 40
Stone dust, 10.7 cu. yds. at $1.00	10 70
Sand, 2 cubic yards, at 0.82½	1 65
Labor	54 77
Total	$96 52

Area, 115 sq. yds.	
Bricks, per sq. yd.	$0.2558
Stone dust and sand	0.1072
Labor	0.4763
Total	$0.8393

CONSTRUCTION AND REPAIR OF MACADAM PAVEMENTS.

During the year there were 6,546 square yards of new macadam pavement laid.

This comprises Washington road, from Gwynn's falls to 345 ft. eastward, 345 ft. by 15 ft.	575	sq. yds.
Viaduct avenue, from north end Stony Run Bridge to Cedar avenue, 505 ft. by 15 ft.	842	"
South side North avenue, from Payson street to Pulaski street, 330 ft. by 17 ft.	623	"
Twenty-fourth street, from Charles street to Hargrove alley (in all), 510 ft. by 29 ft.	1,643	"
Cedar avenue, from north end of Viaduct avenue to First avenue, 1,718 ft. by 15 ft.	2,863	"
Total	6,546	sq. yds.

On Washington road and Viaduct avenue the stone was spread on the existing roadway surface without any preparation of foundation for the macadam.

The layer of stone on Washington road was 4 inches thick. On Viaduct avenue it was 6 inches thick in the centre and 3 inches at the edges, the lower half being 2-inch stone and the upper half or top surface was 1-inch stone. The surface in both cases was covered with ashes, cinders, and quarry refuse, and opened to traffic without being rolled.

The other three pieces of macadam (North avenue, Twenty-fourth street and Cedar avenue) were built in the manner described above, except some grading was done on the roadways before the stone was laid. The macadam was covered with rotten rock and rolled with a steam roller before and after the rotten-rock binder was put down.

In these three pieces of pavement the macadam is 6 inches thick in the centre and 3 inches thick at the edges.

In the five pieces of new macadam pavement laid, all but that at Cedar avenue included work outside the roadbed, such as cleaning gutters, constructing concrete gutters in place, and some patchwork of adjoining macadam.

The expense on Cedar avenue, which was confined to a strip 1,718 feet long and 15 feet wide, gives a fair cost of macadam pavement.

Before laying the stone a trench was dug in the roadway about 2 inches deep along the limits of the macadam and running out to nothing, 18 inches towards the centre, in order to form a shoulder for the stone to be rolled against. The cost was as follows:

Labor for digging shoulder, spreading macadam, excavating, hauling and spreading rotten rock for binder	$	255 93
Steam engineer on roller, 14 days, at $3.00		42 00
Flagman with roller, 14 days, at $1.66.2-3		23 33
Total labor	$	321 26
Gabbro crushed stone, 481.29 cubic yards, $2.20		1,058 80
Coal 2 tons at $4.25		8 50
Oil		23
Total cost	$	1,388 79

This area is 2863.3 square yards. It was covered with 227 cart loads of rotten rock containing some clay, and was excavated on the east side of Viaduct avenue, north of Stony Run bridge.

The average haul of the binder was about 1,200 feet. One cart load of binder covered 12.6 square yards of macadam, and it required 1 cubic yard of stone to lay 5.95 square yards of macadam.

Cost per square yard:

Crushed stone	$0.370
Rolling (including wages of steam engineer, flagman and roller supplies)	0.026
All other labor	0.089
Total cost per square yard	$0.485

During the year 13,067 square yards of macadam roadways were repaired. The stone put on the places repaired varied in depth as the conditions required.

The work consumed:

470.2	cu. yds. gabbro, amounting to	$1,034 43
1,438.8	cu. yds. gneiss, amounting to	2,354 09
Total, 1,909.0		$3,388 52

This gave an average of one cubic yard of crushed stone to 6.85 square yards of repaired roadway, and an average cost for the stone of twenty-six cents per square yard. The steam roller was not used on any of the macadam repairs.

The stone was spread on the roadway and covered in some cases with sand and stone dust from the gutters, and when such was not suitable, the binder was rotten rock, obtained in nearly all cases by short haul.

Some attention has been given to the results of patching macadam pavements without rolling the surface after the stone has been put down, the surfaces in these cases at the end of the year being in about as good condition as that of the macadam when the roller was used. One of the pieces of new macadam (Columbia avenue) was subjected to heavy traffic, and is now in very good condition.

It may be stated here that the weight of the Department's steam roller, with engineer (bunkers half full of coal and water), is ..... 27,390 lbs.

Weight on front or pilot wheel	8,100	"
" rear wheels	19,290	"
" front wheels per inch of tread	162	"
" each rear wheel " "	482	"

The pressure per square inch of the steam roller is a little less than that of a street cart with tires 2½ inches wide and loaded to 2,500 pounds; the diameter of wheels in both cases being about the same.

FOOTWAY CROSSINGS.

Vitrified brick footway crossings were constructed across treets and alleys where the conditions were suitable for this kind of pavement.

In some places on streets of heavy traffic the old flagstones were renewed, and on unpaved suburban streets a single row of flags was laid in some cases.

The following is a list of places where brick footways were laid:

All the crossings were laid with the Maxwell block furnished by Welsh, Gloninger & Maxwell, except 9000 Metropoliton paving blocks, which were furnished by W. Wirt Clarke & Sons.

Location.			Square Feet.	
Side.	Street.	Across.	Cobble-stones Repaved.	Vitrified Brick Paved.
East	Race st	First alley south of Ostend st	65	59.1
South	Ostend st	First alley west of Hanover st	60	50.8
North	Ostend st	First alley west of Hanover st	40	50.0
South	Ostend st	Oliver st	75	75.0
South	Ostend st	Clarkson st	125	67.1
East	Race st	First alley north of West st	118	72.9
North	Cross st	China st	80	65.0
North	Cross st	Briscoe st	90	85.0
East	Payson st	Walbrook ave	90	200.0
West	Payson st	Walbrook ave	105	200.0
West	Appleton st	First alley north of Lanvale st	60	38.0
East	Appleton st	First alley north of Lanvale st	50	38.0
West	Appleton st	First alley south of Lanvale st	80	38.4
East	Appleton st	First alley south of Lanvale st	65	40.0
East	Payson st	Herbert st	60	61.5
South	Walbrook ave	First alley east of Pulaski st	76	47.5
East	Mount st	First alley north of Presstman st	75	42.5
East	Pulaski st	First alley south of Walbrook ave	186	190 0
West	Pulaski st	First alley south of Walbrook ave	50	46.9
West	Pulaski st	Herbert st	50	65.8
South	Walbrook ave	Pulaski st	210	168.7
East	Pulaski st	First alley south of Walbrook ave	80	45.0
North	Federal st	First alley west of Broadway	78	38.7
North	Federal st	First alley east of Broadway	78	45.0
North	Federal st	First alley east of Caroline s	120	45.0
West	Hopkins ave	Lafayette ave	200	170.0

West	Washington st	Lanvale st	84	89.3
East	Washington st	Lanvale st	96	80.8
South	Lafayette ave	Duncan alley	80	85.0
South	Lafayette ave	First alley east of Chester st	95	42 5
East	Washington st.	Ellsworth st	110	102.0
South	Collington ave	First alley west of Gay st	40	40.7
West	Washington st	Lafayette ave	280	183.2
North	Lafayette ave	First alley west of Collington ave	94	42.5
West	Wolfe st	First alley south of Biddle st	120	87.0
West	Wolfe st	First alley north of Chase st	75	45.8
East	Wolfe st	First alley south of Biddle st	85	85.0
East	Wolfe st	First alley north of Chase st	53	41.2
West	Wolfe st	Hanneman st	76	73.3
East	Wolfe st	First alley south of Chase st	66	50.4
East	Woodley st	First alley north of Riggs ave	55	45.0
West	Woodley st	First alley north of Riggs ave	50	45.0
South	Preston st	First alley west of Broadway	160	100.0
West	Woodley st	First alley north of Mosher st	40	45.0
East	Riggs ave	Woodley st	200	180.0
West	Woodley st	First alley south of Riggs ave	50	45 0
East	Woodley st	First alley south of Riggs ave	50	45.0
East	Woodley st	First alley north of Mosher st	40	45.0
East	Woodley st	First alley south of Mosher st	65	42.4
East	Monroe st	First alley south of Mosher st	20	22.5
West	Appleton st	First alley north of Lafayette ave	35	45.0
West	Appleton st	First alley north of Lafayette ave	55	45.0
West	Woodley st	First alley south of Mosher st	40	45.0
East	Appleton st	First alley south of Mosher st	45	45 0
East	Smallwood st	First alley south of Ridgewood ave	500	43.2
East	Smallwood st	Ridgewood ave	900	77.7
East	Smallwood st	First alley south of Walbrook ave	500	41.8
West	Smallwood st.	Herbert st	40	75.6
South	North ave	Pulaski st	195	195.0
East	Smallwood st	First alley north of North ave	36	39.9

Location.			Square Feet.	
Side.	Street.	Across.	Cobble-stones Repaved.	Vitrified Brick Paved.
West	Windsor Mill rd	Liberty rd	56	243.6
South	Windsor ave	Eleventh st	32	144.9
West	Ninth st	First alley south of North ave	54	58.8
South	Forrest ave	Calloway ave	33	99 0
East	Appleton st	Riggs ave	158	165.9
West	Appleton st	Riggs ave	158	165.9
East	Appleton st	Lanvale st	197.5	165.0
East	Appleton st	Lafayette ave	158.0	166.0
West	Appleton st	Lafayette ave	158.0	165.9
South	Saratoga st	First alley east of Fulton ave	60	63 0
North	Clifton st	First alley west of Fulton ave	40	43.7
South	Clifton st	First alley east of Fulton ave	80	42.0
North	Clifton st	First alley east of Fulton ave	60	63.0
North	Clifton st	First alley west of Pennsylvania ave	60	42.0
East	Pennsylvania ave	Richland st	52	56.7
East	Pennsylvania ave	First alley south of Clifton st	34	35.7
South	Barney st	Charles st	108	108.0
West	Patapsco al	First alley north of Barney st	60	42.0
East	Carrollton ave	First alley north of Hollins st	46	42.8
East	Mount st	First alley north of Fayette st	45	43.6
West	Mount st	First alley north of Baltimore st	36	37.8
West	Gilmor st	First alley north of Baltimore st	36	37.8
West	Patapsco st	First alley south of Heath st	95	85.6
East	Patapsco st	Heath st	135	125.2
South	Heath st	Elizabeth st	60	52.1
West	Patapsco st	Heath st	148	124.3

North	Heath st	Elizabeth st	66	52.1
West	Patapsco st	First alley north of Heath st	52.2	40.0
West	Patapsco st	First alley south of Randall st	55	42.0
North	Randall st	First alley east of Charles st	60	42.0
East	Patapsco st	First alley north of Barney st	50	42.0
East	Patapsco st	First alley north of Heath st	150	42 8
West	Patapsco st	Randall st	180.5	165.4
East	Clarkson st	First alley north of Randall st	55	42.0
North	Heath st	First alley east of Covington st	55	42.0
South	Heath st	First alley east of Covington st	55	42.8
South	Barney st	First alley east of Covington st	45	42.0
North	Donaldson st	Charles st	120	102.0
North	Barney st	First alley east of Covington st	51.5	43.2
East	Belt st	Heath st	198	166.3
North	Heath st	First alley east of Belt st	70	35.7
South	Heath st	First alley east of Belt st	60	50.0
North	Barney st	First alley east of Belt st	60	42.0
North	Oliver st	Aisquith st	140	179 2
North	Oliver st	First alley west of Aisquith st	38	48.3
North	Lamont ave	Aisquith st	184	193.2
East	Aiken st	First alley south of Lafayette ave	58	49.2
North	Lafayette ave	Hope st	108	123.2
North	Lanvale st	First alley east of Hope st	105	116.9
West	Aiken st	Lafayette ave	210	204.3
North	Lafayette ave	Aiken st	146	151.7
North	Lafayette ave	First alley east of Hope st	65	56.9
East	Aiken st	First alley north of Lafayette ave	45	48.3
Sonth	Hoffman	First alley east of Eden st	60	46.9
North	Oliver st	First alley east of Caroline st	60	50.7
North	Oliver st	Dallas st	60	56.5
North	Oliver st	First alley west of Bond st	50	47.7
East	Eden st	First alley north of Biddle st	90	46.4
West	Central ave	Second alley south of Eager st	80	48.8
North	Eager st	First alley west of Central ave	65	49.7

Location.			Square Feet.	
Side.	Street.	Across.	Cobble-stones Repaved.	Vitrified Brick Paved.
South	Preston st	First alley west of Eden st	65	46.9
South	Barney st	First alley east of Belt st	51.5	43.2
East	Covington st	First alley north of Fort ave	54	37.8
North	Clement st	First alley west of William st	60	42.0
South	Clement st	First alley west of William st	57	40.0
North	Henrietta st	Plum al	60	50.4
West	Marshall ave	First alley south of Fort ave	54	40.0
South	Clement st	First alley east Light st	54	38.6
West	Marshall ave	First alley north of Randall st	60	51.0
South	Twenty-fourth st	Morton al	120	95.0
South	Twenty-fourth st	Hudson al	56	85.0
North	Twentieth st	Hudson al	80	77.0
East	Oak st	Twenty-fourth st	238	198
South	Twenty-fifth st	Hudson al	126	106.8
North	Twenty-seventh st	Barnard st	118	115.9
South	Twenty-seventh st	First alley west of Barnard st	60	49.7
North	Twentieth st	Kennedy ave	108	177
South	Twenty seventh	First alley west of Barnard st	154	44.9
East	Garrett ave	Twentieth	222	193.2
East	Barclay st	First alley north of Twenty-second st	75	43.5
West	Kennedy ave	First alley north of North ave	108	72.5
South	Twentieth st	First alley north of Cromwell st	75	72.5
East	Lanvale st	Holbrook st	115	145
West	Barclay st	First alley north of Twenty-second st	60	46.8
West	Barclay st	First alley south of Twenty-third st	80	64
North	Lanvale st	Aiken st	128	300.9

North	Lanvale st	First alley east of Hope st	80	91.8
North	Stockholm st	Pinkney st	80.0	85 7
East	Schroeder st	Lemon st	40.0	68.5
West	Schroeder st	Booth st	60.0	50.4
East	Clarkson st	Heath st	135.0	126.0
North	Barney st	First alley east of Clarkson st	60.0	42.8
West	Clarkson st	Heath st	135.0	126.0
North	Barney st	Clarkson st	103.5	96.6
South	McComas st	Hanover st	178.6	166.7
South	Barney st	Clarkson st	48.0	50.4
North	Donaldson st	Hanover st	184.0	168.0
South	Donaldson st	Hanover s'	180.0	168.0
West	Charles st	McComas st	324.0	168.0
South	Gold st	Division st	200.0	166.0
East	Druid Hill ave	North av	370.5	226.8
North	James st	Carey st	178.0	166.0
East	Carey st	James st	175.5	163 8
West	James st	Carey st	175.0	163.8
South	James st	First alley west of Carey st	50.0	42.0
North	Ramsay st	First alley west of Woodyear st	52.0	43.7
West	Carey st	First alley south of James st	50.0	42.0
West	Carey st	Booth st	54.0	50.4
East	Carrollton ave	First alley south of Baltimore st	83.2	43.7
East	Carey st	First alley south of Baltimore st	50.0	42.0
North	Saratoga st	First alley east of Mount st	45.0	37.8
East	Arlington ave	First alley south of Edmondson ave	55.0	42.0
East	Calhoun st	First alley south of Edmondson ave	49 5	37.8
East	Mount st	First alley south of Frederick ave	50.0	42.0
North	Cross st	Carroll st	156.0	175.0
North	Cleveland st	First alley west of Cross st	50.0	50.0
South	Cleveland st	First alley west of Cross st	40.0	42.0
North	Campbell st	St. Peter st	76.0	55.0
East	Nanticoke st	Stockholm st	152.0	173.0
North	St. Peter st	Parkin st	80.0	70.0

Location.			Square Feet.	
Side.	Street.	Across.	Cobble-stones Repaved.	Vitrified Brick Paved
East	Pinkney st	Cross st	88.0	72.0
North	St. Peter st	Wyeth st	65.0	50.4
East	Wyeth st	St. Peter st	60.0	50 4
North	Woodward st	Sterrett st	54.0	54.0
North	Stockholm st	Scott st	167.5	150.7
West	Scott st	Stockholm st	36.0	40.5
West	Sterrett st	Mangold street	125.0	105.0
West	Scott st	Clifford st	55.0	46.4
North	Ramsay st	Dawson st	44.0	46.4
South	Lee st	Comb al	36.0	32 3
West	Fremont st	McHenry st	207.5	174.3
West	Clarkson st	Randall st	175.5	165.9
West	Clarkson st	First alley north of Fort ave	50.0	42.0
East	Clarkson st	First alley north of Fort ave	40.0	42.0
East	Clarkson st	First alley south of Fort ave	40.0	39.7
West	Clarkson st	First alley south of Clement st	100.0	84.0
North	Clement st	First alley west of Hanover st	40.0	42.0
South	Fort ave	Clarkson st	105.0	89.5
East	Clarkson st	First alley south of Heath st	50.0	42.0
South	Barre st	Sterrett st	55.2	52 8
West	Bowen st	Cross st	115.5	126.0
East	Washington st	First alley north of Lombard st	60.0	37.8
East	Castle st	First alley north of Gough st	72.0	50 4
South	Gough st	Durham st	80.0	52.8
South	Gough st	First alley west of Broadway	69 0	48.6
Sou'h	Gough st	Dallas st	69.0	49.9

North	Gough st	Dallas st	60.0	49.2
East	Eden st	First alley south of Baltimore st	67.0	45.
East	Eden st	First alley north of Baltimore st	67 0	42.
West	Eden st	First alley north of Baltimore st	67.0	42.
North	Lombard st	First alley east of Central ave	67.0	42.
South	Gough st	Spring st	53.0	46.8
South	Gough st	First alley west of Ann st	53.0	45.
West	Little Gough st	Granby st	158.0	121.
North	Bank st	Durham st	70.0	50.
South	Bank st	Chapel st	70.0	50.
North	Bank st	Castle st	70.0	50.
West	Chester st	First alley south of Bank st	53.0	42.
South	Eastern ave	Madeira al	72.0	50.4
South	Fayette st	Madeira al	71.0	50.4
West	Patterson Park ave	First alley south of Baltimore st	71.0	50.4
West	Collington ave	First alley north of Orleans st	60.0	42.
North	Fayette st	Edgar place	115.0	84.
West	Lakewood ave	First alley north of Baltimore st	60.0	43.8
East	Washington st	First alley south of Lombard st	51.0	37.8
East	Chester st	First alley south of Bank st	60.0	37.8
North	Bank st	First alley east of Chester st	58.0	42.
West	Bond st	First alley north of Biddle st	100.0	45.
East	Garrett ave	First alley north of North ave	76	63
East	Oak Hill ave	First alley north of North ave	76	63
West	Oak Hill ave	First alley north of North ave	110	63
East	Cromwell st	First alley north of North ave	110	63
West	Cromwell st	First alley north of North ave	110	63
South	Twentieth st	First alley east of Oak Hill ave	100	63
South	Lanvale st	First alley west of Harford ave	97	69.4
West	Aiken st	First alley north of Lafayette ave	97	45
South	Eastern ave	Collington ave	200	176.4
South	Eastern ave	Duncan al	86	50.2
South	Eastern ave	Chester st	204	172.2
North	Canton ave	Duncan al	51	50.2

Location.			Square Feet.	
Side.	Street.	Across.	Cobble-stones Repaved.	Vitrified Brick Paved.
South	Canton ave	Castle st	51	50.2
South	Canton ave	Essex st	294	281.4
North	Canton ave	Durham st	80	50.4
South	Canton ave	Durham st	80	50.4
East	Washington st	First alley south of Bank st	80	50.4
East	Washington st	First alley north of Canton ave	151	79.8
East	Collington ave	First alley sonth of Pratt st	71	42
East	Collington ave	First alley north of Gough st	71	42
West	Chester st	First alley south of Pratt st	71	42
North	Gough st	Castle st	110	100.8
North	Gough st	Duncan al	56	50.4
West	Castle st	First alley south of Pratt st	56	50.4
East	Castle st	First alley south of Pratt st	56	42
South	Lombard st	Chapel st	75	50.4
South	Lombard st	Durham st	75	50.4
East	Ensor st	First alley north of Hoffman st	28	44 2
South	Oliver st	Aisquith st	160	159.1
North	Oliver st	First alley east of Ensor st	65	46.5
West	Twentieth st	Boone st	110	176.8
West	Holbrook st	First alley north of Hoffman st	62	44.2
East	Holbrook st	First alley north of Hoffman st	62	35.4
North	Hoffman st	First alley east of Holbrook st	52	35.4
North	Twentieth st	Boone st	265	166.8
East	Boone st	Twentieth st	178	166.8
South	Twenty-second st	Cromwell st	178	166.8
South	Twenty-first st	Cromwell st	125	168

West	Cromwell st	Twenty-first st	125	168
West	Cromwell st	Twenty-second st	178	168
South	Twenty-second st	Boone st	178	166 8
East	Boone st	Twenty-first st	283	163.8
West	Boone st	Twenty-first st	182	166.8
South	Twenty-first st	Boone st	218	166.8
North	Twenty-first st	Boone st	248	166.8
West	Cromwell st	Twentieth st	200	170.0
North	Twentieth st	Cromwell st	150	168.8
East	Cromwell st	Jenkins' la	286	258.2
North	Twenty-second st	Montebello ave	136	126.0
West	Oak Hill ave	Twentieth st	185	168.6
East	Oak Hill ave	Twentieth st	172	168.6
West	Garrett ave	Twentieth st	120	168.6
North	Twentieth st	Garrett ave	172	168
West	Garrett ave	First alley north of North ave	76	63
West	Ogston st	Pierce st	73	43.8
East	Ogston st	Pierce st	73	60.5
West	Josephine st	Pine st	70	33.9
North	Fayette st	Arch st	70	66.3
South	George st	Abel st	70	52.3
North	Mosher st	Mason al	70	53.0
South	Mosher st	Mason al	71	53.0
East	John st	First alley south of Lafayette ave	71	42.3
East	John st	First alley south of Lanvale st	71	42.3
East	John st	First alley north of Dolphin st	70	44.2
North	Mosher st	First alley east of Mt. Royal ave	70	42.0
North	North ave	Oak st	140	103.9
North	North ave	Oak st	54	43.9
East	Calvert st	Twenty-first st	254	163.1
South	Twenty-fifth st	Lovegrove al	118	56.1
South	Twenty-fifth st	First alley east of Charles st	99	44.2
East	Charles st	First alley north of Twenty-fifth st	100	57.5
South	Twenty-fourth st	First alley east of Calvert st	97	44.2

Location.			Square Feet.	
Side.	Street.	Across.	Cobble-stones Repaved.	Vitrified Brick Paved.
South	Lanvale st	Holbrook st	140	159.0
North	Lanvale st	Holbrook st	178	159.2
West	Holbrook st	Lanvale st	215	132.6
East	Federal st	Holbrook st	68	132.6
West	Federal st	Holbrook st	67	132.6
South	Federal st	First alley east of Ensor st	110	44.2
North	Federal st	First alley east of Ensor st	110	44.2
South	Federal st	First alley west of Aisquith st	110	44.2
North	Oliver st	Holbrook st	180	159.0
North	McHenry st	Woodyear st	105	53.0
South	McHenry st	Calhoun st	240	180.0
North	Ramsay st	Calhoun st	316	171.0
North	Ramsay st	Woodyear st	186	135.0
South	Ramsay st	Norris alley	100	48.0
North	Ramsay st	Bruce st	100	53.0
South	McHenry st	Vincent st	100	53 0
South	Clement st	Jackson st	280	176.8
North	Clement st	Jackson st	196	166.4
East	Henry st	First alley south of Clement st	100	45.0
South	Bowen st	Stockholm st	240	176.8
West	Stockholm st	Bowen st	230	132.6
East	Stockholm st	Bowen st	100	106.1
East	Stockholm st	First alley east of Columbia ave	72	44.2
West	Stockholm st	First alley east of Columbia ave	72	44.2
East	Stockholm st	First alley south of Columbia ave	71	44.2
West	Stockholm st	First alley south of Columbia ave	71	44.2

East	Myrtle ave	First alley north of Pierce st	66	54.0
West	Myrtle ave	First alley north of Pierce st	66	47.7
West	Pine st	First alley north of Pierce st	66	67.5
East	Pine st	First alley north of Pierce st	66	54.0
East	Pine st	Pierce st	71	50.1
East	Myrtle ave	Bradley st	71	52.0
East	Brune st	First alley north of George st	71	39 8
West	Brune st	First alley north of George st	71	44.2
West	Clinton st	First alley north of George st	74	41.7
West	Myrtle ave	Pierce st	74	50.0
East	Appleton st	First alley north of Mosher st	50	45.0
West	Monroe st	First alley south of Mosher st	40	22.5
East	Appleton st	First alley south of Riggs ave	40	45.0
West	Payson st	First alley south of Harlem ave	40	45.0
East	Payson st	First alley north of Edmondson ave	50	45.0
East	Monroe st	First alley north of Edmondson ave	140	45.0
East	Payson st	First alley south of Harlem ave	60	45.0
North	Edmondson ave	First alley east of Fulton ave	65	58.5
West	Appleton st	First alley north of Harlem ave	54	45.0
West	Mount st	First alley south of Lanvale st	63	45.0
East	Mount st	First alley north of Lafayette ave	50	72.0
East	Stricker st	First alley south of Lafayette ave	56	63.0
West	Calhoun st	First alley north of Lanvale st	56	45.0
East	Calh un st	First alley north of Lanvale st	56	45 0
West	Calhoun st	First alley north of Lafayette ave	40	46.9
West	Franklin st	First alley west of Stricker st	96	49 7
West	Parrish al	Franklin st	72	54.5
West	Stricker st	First alley south of Franklin st	88	50.8
East	Stricker st	First alley south of Franklin st	60	44.2
South	Franklin st	First alley west of Calhoun st	70	44.2
East	Gilmor st	First alley north of Lexington st	50	44.1
West	Norris al	Franklin st	60	53.0
North	Franklin st	Vincent al	84	54.9
South	Franklin st	Vincent al	108	53.0
West	Gilmor st	First alley south of Edmondson ave	86	44.2
South	Lombard st	Schroeder st	303	251.9
West	Schroeder st	First alley south of Pratt st	172	45 0

Expended for bricks	$3,048 94
Expended for stone dust and sand	55 61
Expended for inspection	81 24
Expended for hauling	341 08
Expended for freight	4 50
Expended for labor	2,446 43
Total	$5,977 80

Vitrified brick, area paved	3,259.45 sq. yds.
Cobblestone, area paved	4,085 "
Cost per sq. yd. for vitrified brick paving, including necessary cobble paving	$ 1 83

At the following named places new flagstones were put down, either in renewing the old flags or laying temporary flag rows.

Fremont st., between Columbia ave. and Paca st	32 sq. ft.
Mt. Royal ave., between Preston and Cathedral sts	38 "
East side of Irving, across Massachusetts ave	100 "
North side of Frederick road, across Garrison lane	34 "
Canton ave., between Luzerne and Cannon sts	19 "
North side North ave., across Bradish ave	92 "
North side North ave., across Slingluff ave	72 "
North side North ave., across Seventh st	75 "
North side North ave., across Ninth st	78 "
North side North ave., across Tenth st	45 "
West side Chestnut, across Blucher ave	70 "
North side Third ave., across Chestnut ave	100 "
North side Twenty-first st., across Oak st	22 "
West side Chestnut, across Haines st	70 "
East and west sides Brunswick, across Wilkens ave	82 "
West side Twelfth st., north of North ave	34 "
On Camden st., opposite Camden Station	133 "
North side of Fernhill ave., west of Garrison ave	26 "
North and south sides Bellview, across Granada ave	100 "
Total sq. ft	1,222
Amount paid for material	$366 17

Of the above amount, there was charged:

To Footway Crossings	$ 276 41
To Repairs of Roads, Streets, etc.	89 76

Total amount charged to brick footways	$5,977 80
Total amount charged to flagstone footways	276 41
Total	$6,254 21
Less amount for bricks accounted for by O. W. Connet, Ass't. City Engineer	83 59
Balance	$6,170 62

COMPARATIVE COST OF VITRIFIED BRICK FOOTWAY CROSSINGS.

	1901.	1902.	1903.	1904.
Square yards paved	1,514.4	2,329.1	2,942.2	3,259.4
Expended for labor	$1,197 44	$1,498 96	$2,155 80	$2,446 43
Cost of labor per sq. yd	$0 79	$0 64	$0 73	$0 75
Cost of material per sq. yd	1 05	1 08	1 15	1 08
Total cost per sq. yd	$1 84	$1 72	$1 88	$1 83

There was charged to the accounts Maintenance of Bridges and Culverts and Repairs to Sewers, various sums, which comprised principally, the oil furnished for maintaining lights while repairs or construction was under way, and that part of the labor for repairing tools and other work at the material yard, properly belonging to these accounts. There was charged to Repairs of Sewers some expense of repaving after sewer repairs had been made.

The amounts so charged were:

To Maintenance of Bridges and Culverts	$ 67 69
Repairs to Sewers	854 21

Some work was done in repaving over sewers constructed during the year by the department. The following named amounts were expended on these accounts:

SUNDRY SEWERS.

Cobble stone	$44 04	
Sand	93 95	
Oil	11 03	
Labor	1,128 13	
		$1,277 15

Sewer in Laurens street:

Ordinance No. 2, approved October 12, 1903. From Druid Hill Ave. to Fremont St.

Sand	$1 08	
Sheet asphalt paving	42 73	
Labor	368 22	
		412 03

Sewer in Woodyear street:

Ordinance No. 7, approved October 22, 1903.

Labor		337 79

Sewer in Carrollton ave. and Franklin st.:

Ordinances Nos. 153 and 154, approved May 8, 1903.

Oil	2 39	
Labor	178 46	
		180 85

Improvements and additions to drainage system:

Oil		1 55
Total		$2,209 37

Wooden drain boxes were taken out on Foster avenue, between Luzerne and Glover streets, and replaced by new gutter stones and rebut.

355 feet gutter stone, at 25 cents		$88 75
27.5 perches cobble, at $2.00		55 00
32 yards sand, at 78 cents		24 96
		$168 71
Labor		208 23
Total		$376 94

Repairs were made in alley adjoining schoolhouse on Preston street, about 100 feet east of Central avenue, by the Filbert Paving and Construction Co.:

28.19 square yards granolithic paving, at $1.60	$45 10
7.78 square yards vitrified brick paving, at $2.70	21 01
Total	$66 11

The old 4½-inch curbing on west side of Fell street, between Thames and Wolfe streets, was replaced by 6-inch concrete curb; new gutter stone laid, the adjoining part of the street repaved and the curb line straightened:

Labor	$539 76
Material	329 46
Total	$869 22

Statement of work done by the small emergency gangs (this is included in the statement of total work done during the year):

Cobble stone repaved	186,872	square feet.
Belgian block repaved	43,711	"
Flagstones reset	2,710	"
Gutter stone relaid	11,962	lineal feet.
Curbstone reset	7,433	"
New gutter stone set	1,050	"
Expended for labor		$9,454 00
Expended for material		1,336 06
Total		$10,790 06

In May there was purchased by the Department 4 Watson dumping wagons, from the Electric Subway Commission, for use in the repair gangs, the Department employing the drivers and teams.

From the Subway Commission's experience it was found the use of these wagons reduced the expense of hauling, when compared with that of carts. The wagons contain 2 cubic yards of material, whereas a cart load is about five-sixths of a cubic yard.

The daily expense of the wagons is about $3.75 each, against $2.50 for a one-horse cart. For long hauls, and where considerable material was to be moved, the use of wagons the

past season was found to be cheaper, and the wagons were used on that part of the work where the conditions suited.

What is true in every other case of transportation also applies in this Department; that is, where we have small loads, short hauls, and, as a consequence of the latter a relatively large amount of time taken up in loading, an expensive equipment is not the cheaper, and in such cases one-horse carts should be used.

There is much work, however, where the wagons save expense, and their purchase was a wise expenditure.

Unit prices for labor and material are given below.

For 1904 the prices for material are the averages of all the contracts in force during the year.

The prices for labor are derived from a large number of jobs in each class of work.

For laying cobble stone the average of eleven large gangs was taken and at times when this kind of work was exclusively under way. Taken as a whole the unit prices this year vary but little from those of 1903.

COMPARATIVE UNIT PRICES.

	1902	1903	1904
Cobble stone, per perch	$1.8148	$1.902	$1.906
Standard gutter stone, per lin. ft.	0.25	0.30	0.30
Hammer dressed stone, per lin. ft.	0.20	0.25	0.25
4½-inch curbstone, per lin. ft.	0.55	0.60	0.60
Flagstones, per sq. ft.	0.25	0.30	0.30
Paving sand, per cu. yd.	0.5625	0.8245	0.799
Screened sand, per cu. yd.	0.7445	0.977	0.8985
Laying cobble stone, per sq. ft. (labor)	0.0267	0.0327	0.027
Laying Belgian blocks, per sq. ft. (labor)	0.035	0.0430	0.034
Resetting flagstones, per sq. ft. (labor)	0.0834	0.0850	0.081
Resetting gutter stones, per sq. ft. (labor)	0.0328	0.0340	0.033
Resetting new 4½-in. curbstone, per lin. ft. (labor)	0.1000	0.0720	0.105
Resetting old 4½ in. curbstone, per lin. ft. (labor)	0.0707	0.0720	0.071

REPAIRS OF GRANOLITHIC GUTTERS.

Repairs were made to the gutters on various streets, as named below. In some places about 2 inches of the top portion of the gutters was renewed, and in places, the entire gutter was reconstructed.

Street.	Between.	Length.
Saratoga st	Cathedral and Fremont sts	149
Lexington st	Pearl st. and Fulton ave	100
St. Paul st	Monument st. and North ave	100
Calvert st	Read and Preston sts	40
Chase st	Broadway and Greenmount ave	20
Broadway	Chase st. and Market	60
Baltimore st	Broadway and Eastern ave	50
Front st	Baltimore and Gay sts	10
Lafayette ave	John st. and Fulton ave	120
Eutaw st	Biddle and Dolphin sts	85
Total		734

The cost of the work was:

Labor	$199 69
Cement	37 03
Sand	4 45
Crushed stone	10 42
Total	$251 59
Cost per lineal foot	$0.343

After the Laurens street Sewer (Ordinance No. 2, approved October 12, 1903,) was finished, some inlet approaches were constructed of concrete at the intersection of Patterson avenue and Fremont avenue, and Laurens street and Fremont avenue, and at Pennsylvania avenue and Laurens street, 6 in all.

The area being 177 sq. ft.; cost per sq. ft. was. $0.236

There was expended:

Labor	$28 68
Cement	8 00
Sand	99
Crushed stone	4 08
Total	$41 75

PRIVATE PAVING AND INSPECTION.

During 1904 a large amount of paving and repaving was done over drain pipes laid by private parties and corporations, and over various subways.

The accounts were kept in the way heretofore followed, with some modifications.

The permits issued by you to open the pavements on streets require the applicant to bear the expense of keeping the pavement in repair for three years after the street is opened. The work to be done by the city.

In some cases a difference of opinion arose between the Department and the parties who had excavated in the streets when bills were rendered for its restoration, as to whether the repaving done was rendered necessary by the trench formerly opened, or by other causes for which the city was responsible.

An inspection of the street before repaving was done, usually settled this question, and after August 1, the parties interested were notified to inspect certain streets that would be repaved over the trenches made by them and at their expense. This left all the work of this nature in the Department's hands, as it should be.

By an agreement with the United Railways and Electric Company certain paving was done along and within the Company's tracks on streets paved with sheet asphalt and asphalt blocks.

The amount of bills rendered on account of repairs and repaving over trenches on sheet asphalt and asphalt block paved streets is:

ACCOUNT OF SHEET ASPHALT PAVEMENTS.

To the United Railways and Electric Company	$3,750 71
To the C. & P. Telephone Company	219 76
To the Consolidated Gas Company	367 61
To H. C. Bowman	9 15
To the Fire Insurance Salvage Corps	82 81
To Thomas & Sherwood	92 51
	$4,522 55

ACCOUNT OF ASPHALT BLOCK REPAIRS.

To the United Railways and Electric Co	$1,580 89	
To the Consolidated Gas Co	86 57	
To the C. & P. Telephone Co	48 18	
		$1,715 64
Total		$6,238 19

LAYING TERRA-COTTA DRAIN PIPES.

Drain pipes were laid under the roadway at street crossings and other places as follows:

LOCATION.	Length in feet.	Diameter.
On Callaway avenue, at Springdale avenue	72	12 inches.
On Callaway avenue, at Forrest avenue	64	12 "
On Callaway avenue, at Fairmount avenue	72	12 "
On Callaway avenue, at alley between Forrest and Fairview avenues	43	12 "
On Cleveland avenue, at Forrest avenue	60	12 "
On Millington lane, at Lehman street	34	15 "
On Merryman's lane, at Hickory avenue	60	15 "
On Twenty-eighth street, at Viaduct avenue	54	15 "
On Whitelock street, at Bolton avenue	24	15 "
On Gorsuch avenue, between Montebello and Liberty avenues	8	12 "
On Oxford avenue, from Frisby street eastward.	78	4 "
Total	569	

The 4-inch pipe was an extension of a pipe laid by the Department in 1903 to provide for draining a cellar at the corner of Oxford avenue and Frisby streets, where the street grade had been raised. Some of the drain pipes laid heretofore in what was called the Annex will have to be removed and replaced with larger pipes. The capacity of the pipes is sufficient for the area drained, but is not sufficient to prevent filling up with street debris washed in, and in case of low grades these small pipes become filled with sand and mud.

In this connection it should be stated that in no case should drain pipes for surface drainage be laid in unpaved streets of less than 12 inches in diameter.

MAINTENANCE OF PAVING ALONG STREET RAILWAYS.

Under the method followed in Baltimore in granting franchises to street railway companies to occupy the streets with tracks, there has been included as a part of the Franchise value, a condition that the companies pave and maintain all paving between and two feet outside the rails. This has been modified in some cases, but the principal underlies all railway franchises up to the present time.

In the early days of street railways, when the motive power was horses, it might be said there was to some extent a natural sequence between the companies using a certain part of the streets and maintaining the paving on this part. However, the extent of wear within the rails due to the railway companies traffic would be something impossible to ascertain.

Under the present day system of street car propulsion there is no reason in this respect to regard the paving in the railway zone as different from that of the other part of the street. Where horses were used to draw the cars, the companies had some money interest in keeping the pavement within the rails in a fair state of repair.

Under present day conditions the railway company has no business interest whatever in maintaining a good pavement along and within the tracks.

The condition of the track pavement has no relation to the volume of railway traffic or the cost of hauling the cars. It appears to me that the railway companies should not be required or permitted to have anything to do with the track paving. This part of the contract between the city and the railway companies has no foundation in business principles.

It may be said that the ordinances give the City Engineer all necessary authority to compel the companies to comply with the law, requiring the latter to do repair work on his direction. Granted so. The law says the companies shall keep the paving in repair or in good repair. What is the result? Without intimating that the railway official is actuated

by any other than the highest motives and integrity, his views are liable to differ with the departments as to when a piece of pavement is in good repair.

In my estimation, the franchise values assessed hereafter for operating railways on the streets, should include the expense of first pavement and maintenance. All this work should be done by the city. To know what amount to add to the franchise value on account of the pavement and repair expense which would be borne by the city, could be closely determined. Some amount for this expense must have been determined heretofore in granting railway franchises.

The paving and repaving over private drains and subways of corporations is now done by the city, and the results are satisfactory.

The present system of railways tracks paving leads to endless controversy and disappointment in results.

The work done during the year on streets, roads and alleys is briefly described as follows:

Streets, etc.	Between	Description of Work.
Aliceanna street.	President and Eden streets.	Repaired pavement.
Appleton street.	Intersection with Mosher street.	Two new gutters laid with cobble rebuts.
Amity street.	Pratt and Boyd streets.	Greater part of curb reset; repaved from curb to curb; new gutter laid for greater part.
Abel street.	Franklin and George streets.	New gutter laid for the greater part; repaved from curb to curb.
Arch street.	Raborg and Fayette streets.	Small amount of new gutter laid; small amount of old gutter relaid; part repaved from curb to curb; part repaired.
Armstead lane.		New gutter laid in part; old gutter relaid; part of curb reset; repaved from curb to curb.
Alley 20 feet wide.	Parkwood and Evergreen Terrace and Maple and Ruskin avenues.	About 200 feet of new gutter laid; old gutter relaid; repaved from building line to building line.
Alley 10 feet wide.	Parkwood avenue and Woodbrook avenue for about 80 feet north of Fulton avenue.	About 80 feet new gutter laid; repaved from building line to building line.
Bokee street.	Washington and Chester streets.	Repaired pavement.
Boston street.	Chester and Chesapeake streets.	" "
Block street.	West Falls avenue and Drawbridge.	" "
Biddle street.	Greenmount avenue and Barclay street.	Repaired pavement; large portion of gutter relaid and small portion of curb reset.
Bethel street	Lafayette avenue and Lanvale street.	Repaired pavement; small portion of new gutter laid and curb reset.
Bank street.	Washington and Chester streets.	Repaired pavement; large portion of gutter relaid and curb reset.
Bond street.	Bank street and Eastern avenue.	Repaved from gutter to rail east side; large portion new gutter laid and curb reset; west side repaired.

Broadway.	Canton avenue and waters edge.	Repaired pavement; small portion new gutter laid and curb reset.
Baltimore street.	Howard and Eutaw streets.	Repaved from gutter to rail, north side.
Baltimore street.	Liberty and Howard streets.	Repaired pavement.
Biddle street.	Gay and Wolfe streets.	Repaired pavement; large portion new pavement laid and curb reset.
Brady avenue.	York road and Reese street.	Cleaned ditch.
Biddle street.	Guilford and Barclay streets.	Gutter relaid in part; repaved from gutter to gutter.
Buren street.	Monument and Eager streets.	Small amount of new gutter laid; repaved for the most part from gutter to gutter; repaired pavement in part.
Brunt street.	Lanvale street and Lafayette avenue.	New gutter laid for 120 feet north of Lanvale; repaved from curb to curb for 120 feet north of Lanvale street; remaining portion repaired.
Bruce street.	Harlem avenue and Lanvale street.	Small amount of new gutter laid; part of old gutter relaid; cobble pavement repaired.
Bruce street.	Baltimore and Lexington streets.	New gutter laid for greater part; old gutter relaid in remaining part; curb reset in part; repaved from curb to curb.
Boyd street.	Poppleton and Schroeder streets.	New gutter laid in part; old gutter relaid in remaining part; repaved from curb to curb.
Barre street.	Fremont and Little Greene streets.	New gutter laid in part; old gutter laid in remaining part; small amount of curb reset; repaved from curb to curb.
Burgundy alley.	Fremont and Little Greene streets.	New gutter laid for greater part; old gutter relaid in remaining part; curb reset for greater part; repaired from curb to curb.
Battery avenue.	Hamburg street and Warren avenue.	Gutter relaid in part; part repaved from curb to curb; repaired pavement in part.
Beverly street.	Light and Charles streets.	Old gutter relaid throughout on south side; repaved along gutter on south side; repaired pavement in part.

Streets, etc.	Between	Description of Work.
Barney street.	Hanover and Clarkson streets.	Gutter relaid in part; part repaved from curb to curb; repaired pavement in part.
Bowen lane.	North of Frederick road.	About 100 feet new gutter laid; part of old gutter relaid; part of old curb reset; repaved in part from curb to curb; repaired pavement in part.
Beech avenue.	Tenth street and Slingluff avenue.	Cleaned ditches and resurfaced driveway.
Clay street.	Sharp and Charles streets.	North side repaired.
Caroline street.	Aliceanna street and Eastern avenue.	East side repaired.
Canton avenue.	East Falls avenue and Broadway.	Repaired pavement.
Canton avenue.	Wolfe street and Collington avenue.	North side repaired.
Canton avenue.	Wolfe street and Broadway.	North and south sides repaired.
Collington avenue.	Canton avenue and Baltimore street.	Small portion of gutter relaid.
Chester street.	Canton avenue and Gough street.	Repaired pavement.
Chester street.	Pratt and Lombard streets.	Repaired pavement; large portion of gutter relaid; small portion of curb reset
Caroline street.	Aliceanna and Dock streets.	Repaired pavement.
Clement street.	Jackson and Covington streets.	Repaired pavement; large portion of gutter relaid and small portion of curb reset.
Covington street.	Cross and Montgomery streets.	Repaired pavement; small portion of gutter relaid.
Cathedral street.	Oliver and Saratoga streets.	Repaired pavement; small portion of gutter relaid and curb reset.
Castle street.	Pratt and Baltimore streets.	Repaired pavement; small portion of gutter relaid and curb reset.
Chase street.	Broadway and Washington street.	Repaired pavement from gutter to gutter; large portion of gutter relaid and curb reset.
Cromwell street.	Twentieth and Twenty-second streets.	West side repaired pavement; large portion of gutter relaid.

Chapel street.	Ashland avenue and Madison street.	Repaired pavement from curb to curb; small portion of curb reset.
Castle street.	Bank and Gough streets.	Repaired pavement; large portion of gutter relaid and curb reset.
Collington avenue.	Bank and Gough streets.	Repaired pavement; small portion of gutter relaid and curb reset.
Collington avenue.	Jefferson and McElderry streets.	Repaired pavement from gutter to gutter; large portion gutter relaid; small portion curb reset.
Clifton street.	Woodbrook avenue and Francis street.	Repaired pavement; small portion of gutter relaid; large portion new paving laid north side.
Central avenue.	Orleans and Jefferson streets.	West side repaired pavement; large portion gutter relaid.
Central avenue.	Mullikin and Jefferson streets.	Repaired pavement; small portion of gutter relaid and curb reset.
Caroline street.	Bank street and Eastern avenue.	Repaired pavement from curbs to rail; new 4½-inch curb set; new gutter laid on east side.
Centre street.	North and Holliday streets.	Repaired pavement from gutter to gutter; small portion new gutter laid.
Centre street.	Holliday and Front streets.	Repaired pavement.
Chesapeake street.	Boston street and Fait avenue.	" "
Central avenue.	Pratt and Baltimore streets.	Repaired pavement from track to track.
Chapel street.	Fairmount avenue and Fayette street.	Repaired pavement; small portion gutter relaid and curb reset.
Central avenue.	Lancaster street and Canton avenue.	Repaired pavement; small portion gutter relaid and curb reset.
Chesapeake street.	Elliott and Dillon streets.	Repaired pavement; small portion gutter relaid and curb reset.
Canton avenue.	Luzerne and Cannon streets.	Repaired pavement; large portion gutter relaid and curb reset.
Cedar avenue.	Merryman and First avenue.	Cleaned gutters and slight repairs made to macadam.

Streets, etc.	Between	Description of Work.
Carrollton avenue.	Mulberry street and Edmondson avenue.	Small amount of new gutter laid; old gutter relaid on east side in greater part; small amount of curb reset; intersection of Franklin repaved throughout; east side repaved over sewer trench between Franklin and Edmondson; east side repaired between Mulberry and Franklin.
Calhoun street.	Ramsay street and B. & O. R. R.	Gutter relaid on west side; repaved along gutter about 10 feet wide.
Clifford street.	Scott and Poppleton streets.	New gutter laid for greater part; old gutter relaid in remaining part; curb reset for greater part; repaved from curb to curb.
Callender alley.		New gutter laid for greater part; old gutter relaid for remaining part; large part of curb reset; repaved from curb to curb.
Cross street.	Eutaw and Scott streets.	Repaired pavement.
Christian street.	Smallwood and Pulaski streets.	Gutter relaid; repaved on south side.
China alley.	Montgomery and Lee streets.	New gutter laid for greater part; old gutter relaid for remaining part; repaved from curb to curb.
China alley.	Cross and Stockholm streets.	Gutter relaid in greater part; repaved from curb to curb in greater part.
Claret alley.	West and Stockholm streets.	Gutter relaid in greater part; repaved from curb to curb.
Clement street.	Light street and Riverside avenue.	Gutter relaid for greater part; repaved for greater part from curb to curb; remaining part repaired.
Covington street.	Clement street and Fort avenue.	Gutter on west side relaid for greater part; repaved along west gutter 10 feet wide.

Cider alley.	Eutaw and Howard streets.	Gutter relaid in part; repaved in part from curb to curb.
Cohen and Jew alley.	Mulberry and Eutaw streets.	New gutter laid for greater part; remaining old gutter relaid; paved from building line to building line.
Clendenin street.	Madison and McCulloh streets.	Gutter on north side relaid for greater part; repaved along gutter on north side; repaired pavement.
Dallas street.	Lombard and Fayette streets.	Repaired pavement; large portion of gutter relaid and curb reset.
Durham street.	Chase street and Ashland avenue.	Repaired pavement; small portion of gutter relaid and curb reset.
Dallas street.	Pratt and Gough streets.	Repaired pavement, curb to curb; a large portion of new gutter laid and curb reset.
Durham street.	Fayette and Orleans streets.	Repaired pavement; small portion of gutter relaid and curb reset.
Durham street.	Gough and Pratt streets.	Repaired pavement curb to curb; large portion of new gutter laid and curb reset.
Durham street.	Pratt street and Fairmount avenue.	Repaired pavement; small portion of gutter relaid and curb reset.
Dallas street.	Mullikin and Fayette streets.	Repaired pavement; small portion of gutter relaid and curb reset.
Durham street.	Eastern Avenue and Bank street.	Repaired pavement curb to curb; small portion new gutter laid and curb reset.
Durham street.	Canton and Eastern avenues.	Repaired pavement.
Dover street.	Fulton avenue and Addison alley.	Gutter reset; repaved from curb to curb.
Dover street.	Eutaw and Paca streets.	New gutter laid in greater part; old gutter relaid in remaining part; repaved from curb to curb.
Druid Hill avenue.	Whitelock and Retreat streets.	New gutter laid on east side in greater part; old gutter relaid on east side in remaining part; repaved between east curb and east rail of United Railways.
Dellwood avenue.	Conduit and Sycamore avenues.	Built bulkhead on south side.

Streets, etc.	Between	Description of Work.
East Falls avenue.	Lancaster street and East Falls avenue.	Repaired pavement.
Eden street.	Oliver and Lanvale streets.	South side patched; large portion new gutter laid; small portion curb reset.
Eager street.	Broadway and Wolfe street.	Repaired pavement gutter to gutter; small portion gutter relaid and curb reset.
Exeter street.	Baltimore and Gay streets.	Large portion new gutter laid and curb reset.
Ensor street.	Hoffman and Lanvale streets.	Small portion new gutter laid and curb reset.
Eastern avenue.	Bond and Wolfe streets.	Small portion new gutter laid and new curb set.
Ensor street.	Mott and Monument streets.	East side patched; small portion gutter relaid and curb reset
Eden street.	Pratt and Lombard streets.	Repaired pavement; small portion gutter relaid.
Exeter street.	Lancaster and Aliceanna streets.	Repaired pavement.
Eutaw Place extend'd	Whitelock street and Druid Hill Park.	Patched macadam.
Edmondson avenue.	Western city limits and Pulaski street.	Patched macadam and cleaned ditches.
Edmondson avenue.	Carrollton avenue and Calhoun street.	North gutter laid with new gutter in places about 200 feet; north gutter relaid in places; repaved along north gutter in places; repaved over sewer trench between Woodward and Carey streets.
Etting street.	Robert street and North avenue.	New gutter laid in a few places; old gutter reset in places; repaved in places from curb to curb; patched in places.
Evergreen Terrace.	Maple and Orem streets.	New gutter laid about 120 feet; old gutter relaid in part; repaved from gutter to gutter.
Eutaw street.	Camden and Hamburg streets.	Gutter relaid in places; curb reset in places; patched.
Elbow lane.	Fremont and Paca streets.	New gutter laid in greater part; old gutter relaid in remaining part; repaved from curb to curb.

Eagle street.	Monroe and Smallwood streets.	New gutter laid in part; old gutter relaid in great part; repaved between Monroe and Payson from curb to curb; repaved between Payson and Smallwood along north gutter.
Erdman avenue.	Harford and Belair roads.	Patched macadam and cleaned ditches.
Fayette street.	Exeter street and Jones' Falls.	Repaired pavement; small portion new gutter laid and new curb set.
Fremont avenue.	Lafayette avenue and Mosher street.	West gutter relaid for about 150 feet; repaved between west gutter and track.
Fremont street.	Columbia avenue and South Eutaw st.	Gutter relaid in places; repaved between Columbia avenue and South Paca street from gutter to gutter; remaining part patched.
Franklin street.	Carrollton and Fulton avenues.	Gutter relaid in places; paved over sewer trench between Carrollton and Carey; paved from curb to curb between Gilmor and Mount about 200 feet; patched in places.
Franklin street.	Ogston and Abel streets.	New gutter laid in part on north side; old gutter relaid in part; repaved along gutters.
Friendship street.	York road and Montebello avenue.	Cleaned ditches.
Federal street.	Caroline and Eden streets.	Caulked gutters.
Fairmount avenue.	Milton and Montford avenues.	Repaired pavement south side; small portion gutter relaid and curb reset.
Foster avenue.	Cannon and Glover streets.	Repaired pavement; small portion gutter relaid and curb reset.
Francis street.	Retreat and Clifton streets.	Repaired pavement; large portion gutter relaid.
Fell street.	Thames and Wolfe streets.	West side patched; new concrete curb set and new gutter laid.
Falls road.	Northern city limits to Third avenue.	Paved gutter across Merryman's lane; built bulkhead at stream S. of Merryman's lane and cleaned ditches.
Forrest avenue.	New Liberty road and W. city limits.	Resurfaced macadam and cleaned ditches.
Franklin street.	Calverton road and Pulaski street.	Patched macadam and cleaned ditches
Gay street.	Monument and Lanvale streets.	Caulked gutters; small portion of gutter relaid and curb reset.

Streets, etc.	Between	Description of Work.
Gay street.	Exeter and Forrest streets.	Repaired pavement.
Gough street.	Central avenue and Caroline street.	Small portion new gutter laid and curb reset; repaired pavement south side.
Greenmount avenue.	Forest street and North avenue.	Repaired pavement; small portion gutter laid and curb reset.
Guilford avenue.	Twentieth and Twenty-second streets.	New gutter laid in part; old gutter relaid in part; new curb set about 80 feet; part repaved from curb to curb; part patched.
Gilmor street	Fayette and Lanvale streets.	New gutter laid in places on west side; old gutter relaid in places on west side; repaved along west gutter.
Garrett alley.	Eutaw and Paca streets.	New gutter laid in part; old gutter relaid in remaining part; repaved from curb to curb.
Grindall street.	William street and Riverside avenue.	Gutter relaid in part; old gutter relaid in remaining part; repaved from curb to curb.
Guilford alley.	Light and Charles streets.	New gutter laid in greater part; old gutter relaid in remaining part; repaved from curb to curb.
Gittings street.	Light and William streets.	Curb reset in places; gutter relaid in greater part; new gutter laid about 100 feet; repaved from curb to curb.
Gorsuch avenue.	York road and Harford avenue.	Repaired cobble, drain box and cleaned ditches.
Garrison lane.	Edmondson avenue and Frederick road.	Patched macadam and cleaned ditches.
Hoffman street.	Gay and Chester streets.	Repaired pavement and small portion gutter laid.
Hudson street.	Boston and Cannon streets.	Repaired pavement gutter to gutter.
Harford avenue.	Madison street and Ashland avenue.	Repaired pavement.
High street.	Baltimore and Hillen streets.	Repaired pavement; small portion new gutter laid and curb reset.

Hoffman street.	Aisquith and Holbrook streets.	Repaired pavement; small portion gutter relaid and curb reset.
Holbrook street.	Biddle and Hoffman streets.	Repaired pavement; small portion gutter relaid and curb reset.
High street.	Baltimore and Pratt streets.	Repaired pavement; small portion gutter relaid and curb reset.
Hargrove alley.	Read and Biddle streets.	Gutter relaid in part; repaved in part from gutter to gutter; repaired pavement in part.
Hargrove alley.	Saratoga and Pleasant streets.	New gutter laid about 100 feet; old gutter relaid in part; repaved in part from gutter to gutter; patched in part.
Hunter alley.	Twenty-second and Twenty-third sts.	Gutter relaid in part; repaved in part from curb to curb.
Hollins alley.	Pratt and Lombard streets.	Gutter relaid in part; curb reset in places; repaved in part from curb to curb; patched in part.
Harmison street.	McHenry and Pratt streets.	New gutter laid in part; old gutter relaid in part; repaved in part from curb to curb; patched in part.
Harmony lane.	Fremont and Schroeder streets.	Gutter relaid in places; curb reset in places; patched.
Howard street.	Camden and Montgomery streets.	New gutter laid 327 feet; new curb set 245 feet; old gutter relaid in greater part; old curb reset in greater part; repaved in greater part from curb to wall of Belt Line R. R.; patched in part.
Hamburg street.	Riverside and Battery avenues.	New gutter laid about 100 feet; old gutter relaid; patched.
Hughes street.	Hanover and Sharp streets.	Gutter relaid for about 150 feet from Hanover; repaved from curb to curb for same distance.
Hughes street.	Covington and Waterside streets.	Gutter relaid in part; curb reset in part; repaved in part from curb to curb; patched in part.

Streets, etc.	Between	Description of Work.
Hamburg street.	Hanover and Leadenhall streets.	New gutter laid 150 feet; old gutter relaid in greater part; patched.
Henry street.	Clement street and Fort avenue.	Gutter relaid in greater part; repaved from curb to curb in greater part; patched in part.
Hall alley.	Clement and West streets.	New gutter laid in greater part; gutter relaid in remaining part; repaved from curb to curb.
Heath street.	Hanover and Clarkson streets.	Gutter relaid for greater part; repaved for greater part from curb to curb; patched in part.
Hillen road.	Harford road and Northern city limit.	Patched macadam and cleaned dtches.
Iceland street.	Fremont and Barre streets.	New gutter laid about 500 feet; old gutter relaid; part of curb reset; repaved from curb to curb.
Jefferson street.	Bond street and Broadway.	South side repaired pavement; large portion gutter relaid and curb reset.
Jackson street.	West and Clement streets.	Repaired pavement.
Jordan alley.	Dolphin and Lanvale streets.	New gutter laid about 300 feet; old gutter relaid; repaved from building line to building line over greater part; repaired pavement in part.
Jordan alley.	North avenue and Ducatel street.	New gutter laid about 100 feet; old gutter relaid; repaved from building line to building line.
Jordan alley.	Robert and Presstman streets.	New gutter laid about 60 feet; old gutter relaid in part; paved in part from building line to building line; repaved pavement in part.
Johnson street.	York and Montgomery streets.	Small amount of gutter relaid; paved along gutter; repaired pavement over large area.
Jefferson street.	Montebello avenue and Tinges lane.	Surfaced portion of unpaved street with refuse stone.

Jenkins lane.	Cromwell street and Belt Line R. R.	Raised low portion of roadway and cleaned ditches.
King street.	Penn and Fremont streets.	New gutter laid about 400 feet; old gutter relaid; repaved from building line to building line.
Kimmel alley.	Lexington and Clay streets.	New gutter laid about 80 feet; repaved from building line to building line for about 100 feet from Clay street
Lancaster street.	Wolfe and Ann streets.	Repaired pavement.
Lancaster street.	President and Caroline streets.	Repaired pavement.
Lombard street.	Washington and Chester streets.	Repaired pavement; small portion gutter relaid and curb reset.
Lombard street.	Ann and Wolfe streets.	Repaired pavement; small portion new gutter laid and curb reset.
Lancaster street.	Broadway and Bond street.	Repaved from curbs to rail; large portion new gutter laid.
Lanvale street.	Intersection of Washington.	Repaved from curb to curb on Lanvale street; repaved from curbs to rail on Washington.
Liberty street.	Baltimore and Fayette streets.	Repaired pavement.
Lafayette avenue.	Fulton and Payson streets.	Repaired pavement.
Lanvale street.	Gilmor and Mount streets.	Gutter relaid on both sides; repaved along gutter; part of curb reset.
Lombard street.	Stockton and Carey streets.	New gutter laid on north side about 180 feet; repaved along gutter.
Lemmon street.	Amity and Schroeder streets.	Gutter relaid; repaved from curb to curb.
Linden avenue.	North avenue and Whitelock street.	New gutter laid on west side about 50 feet; old gutter relaid in places on west side; repaved in places along west gutter; paved over unpaved area between west curb and rail, from North avenue about 200 feet.
Laurens street.	Pennsylvania and Druid Hill avenues.	Repaved over sewer trench.
Little Greene street.	S. Paca and Conway streets.	Repaired pavement.
Liberty road (old).	Garrison avenue and Reisterstown road.	Patched macadam and cleaned gutter.

Streets, etc.	Between	Description of Work.
Mullikin street.	Bond and Dallas streets.	Repaired pavement; large portion of new gutter laid and curb reset.
Merryman avenue.	York road and Barclay street.	New gutter and rebut laid on south side.
Miller street.	Bond street and Broadway.	Repaired pavement; large portion new gutter laid; small portion curb reset.
McKim street.	Eager and Neighbor streets.	Repaired pavement from gutter to gutter; small portion gutter relaid and curb reset.
Montford avenue.	Essex and Aliceanna streets.	Repaired pavement; small portion of gutter relaid.
McKim street.	Neighbor and Madison streets.	Repaired pavement.
McDonogh street.	Chase and Gay streets.	Repaired pavement; small portion of gutter relaid and curb reset.
McCulloh alley.	Lafayette avenue and Wilson street.	New gutter laid about 200 feet; old gutter relaid for greater part; paved in part from building line to building line; repaved pavement in part.
Monroe street.	Wilkens avenue and bridge over B. & O. R. R.	New gutter laid about 140 feet; old gutter relaid in part; repaved along gutter; repaired pavement.
Monroe street.	Patterson avenue and Lorman street.	Two new gutters laid about 700 feet in all with cobble rebuts.
Morris alley.	North avenue and Whitelock street.	Gutter relaid in places; repaired pavement.
Morris alley.	Laurens and Robert streets.	Gutter relaid in part; new gutter laid about 100 feet; repaved in part from building line to building line; repaved pavement in part.
Morris alley.	Dolphin and McMechen streets.	New gutter laid about 450 feet; old gutter relaid in places; paved in places from building line to building line; repaired pavement in places.

Morris alley.	Biddle and Preston streets.	New gutter laid over greater part about 500 feet; old gutter relaid in remaining part; curb reset in greater part; repaved from curb to curb.
Morton alley.	Biddle and Preston streets.	New gutter laid about 70 feet; old gutter relaid over greater part; repaved in part from curb to curb; repaired pavement in part.
Morton alley.	Mt. Royal avenue and Oliver street.	New gutter laid in part; old gutter relaid in remaining part; repaved from curb to curb.
Morton alley.	Lanvale street and Lafayette avenue.	New gutter laid about 200 feet; old gutter relaid; repaved from building line to building line.
McCulloh street.	Robert and Gold streets.	Repaired pavement.
Mosher street.	Pennsylvania ave. and Fremont street.	New gutter laid on north side about 70 feet; old gutter relaid in places on north side; repaved along gutter on north side.
Myrtle avenue.	Mulberry and George streets.	New gutter laid about 700 feet; old gutter relaid over greater part; repaved in greater part from curb to curb; repaired pavement in part.
Montgomery street.	Eutaw street and China alley.	New gutter laid about 160 feet; curb reset; repaved from curb to curb.
Mulberry street.	Calhoun street and Fulton avenue.	Gutter relaid in places; paved along gutter in places; repaired pavement in places.
Merryman avenue.	Elm avenue and Stony Run.	Repaired washout and cleaned gutters.
Merryman avenue.	Stony Run and Barclay street.	Built fence; repaired washout and cleaned gutters.
Madison street.	Montebello avenue and Liberty street.	Filled washout and cleaned ditch.
Montbello avenue.	Old York road and Gorsuch avenue.	Filled washout and cleaned ditch.
Morris avenue.	Westwood street and Franklin road.	Patched macadam and cleaned ditches.
North street.	Centre and Bath streets.	Repaired pavement.
North avenue.	Greenmount and Guilford avenues.	Repaired pavement on east side.
North avenue.	Charles and Payson streets.	Repaired pavement.
Nicholson street.	Intersection with Hull.	New gutter laid about 50 feet; old gutter relaid; cobble rebut paved.

Streets, etc.	Between	Description of Work.
North avenue.	Payson and Twelfth streets.	Paved north gutter from Western Maryland Railroad 200 feet westward, and from Eighth to Tenth streets; cleaned gutters and ditches, and patched macadam.
Orleans street.	Milton avenue and Luzerne street.	Repaired pavement south side; large portion gutter relaid.
Orleans street.	Lakewood avenue and Glover street.	Repaired pavement south side; large portion gutter relaid.
Orleans street.	Bond street and Broadway.	Repaired pavement south side; large portion gutter relaid and curb reset.
Oliver street.	Aisquith and Ensor streets.	Repaired pavement; small portion gutter relaid and curb reset.
Orleans street.	Broadway and Patterson Park avenue.	Repaired pavement; small portion gutter relaid and curb reset.
Ogston street.	Pierce and Franklin streets.	New gutter laid about 70 feet; old gutter relaid; repaved from curb to curb.
Oak street.	North avenue and Twenty-first street.	Repaired pavement.
Old York road.	York rd. and Northern city limits.	Repaired macadam and cleaned ditches.
Oxford avenue.	York Road and Reese street.	Cleaned gutters.
Old Frederick road.	Western city limits and Frederick road.	Cleaned ditches.
Park avenue.	Lexington and Saratoga streets.	Repaved over drain.
Patterson Park ave.	Chase and Biddle streets.	Repaved east side from rail to curb.
Philpot street.	Wells and Thames streets.	Repaired pavement.
Preston street.	Wolfe and Washington streets.	Repaired pavement north side from curb to rail; small portion curb reset.
Pleasant alley.	Washington and Castle streets.	Repaired pavement from curb to curb; large portion curb reset.
Preston street.	Ensor and Harford avenue.	Repaired pavement; small portion gutter relaid and curb reset.

Pratt street.	Howard and President streets.	Repaired pavement north side; from gutter to south rail of north track.
Parkin street.	Hollins and Lombard streets.	Repaved in part from curb to curb; repaired pavement in part.
Penn street.	Pratt street and Columbia avenue.	Gutter relaid in places; repaved in places from curb to curb; repaired pavement in places.
Pulaski street.	Pratt and Wilhelm streets.	New gutter laid on east side about 160 feet; old gutter relaid in places; repaved along gutter on east side; repaired pavement in places.
Preston street.	Pennsylvania and Druid Hill avenues.	Gutter relaid in places; curb reset in places; repaired pavement.
Poultney street.	Light and Patapsco streets.	Gutter relaid in greater part; curb reset in greater part; repaved in part from curb to curb; repaired pavement.
Patapsco street.	Ostend street and Fort avenue.	Repaired pavement over large area.
Park Heights avenue.	Northern city limits to Reisterstown rd.	Cleaned gutters.
Philadelphia road.	Eastern city limits to Kenwood avenue.	Patched macadam and enlarged ditches.
Retreat street.	Druid Hill avenue and Francis street.	Repaired pavement on north side; small portion gutter relaid; paved south side.
Regester street.	Aliceanna street and Eastern avenue.	Repaired pavement.
Ruskin avenue.	Pennsylvania avenue and Parkwood st.	Gutter relaid for about 100 feet from Pennsylvania avenue; repaved over same area from curb to curb.
Ramsay street.	Scott and Poppleton streets.	Gutter relaid in places; curb reset in greater part; repaired pavement.
Ramsay street.	Carey and Calhoun streets.	New gutter laid about 50 feet on south side; gutter relaid on south side; curb reset on south side; repaved on south side.
Raborg street.	Fremont and Stockholm streets.	Gutter relaid in places; repaired pavement.
Raborg street.	Pearl and Pine streets.	Gutter relaid in places; repaired pavement.
Ropewalk lane.	Charles and Race streets.	New gutter laid about 100 feet; old gutter laid over greater part; paved in greater part from building line to building line; repaired pavement in part.

Streets, etc.	Between	Description of Work.
Richardson street.	Fort avenue and Clement street.	New gutter laid with cobble rebut about 200 feet.
Riggs avenue.	Carrollton avenue and Calhoun street.	Repaired pavement.
Roland avenue.	Third and Fourth streets.	Repaired west gutter and macadam near Third avenue.
Remington avenue.	First avenue and Thirtieth street.	Patched macadam; built fence; cleaned ditches.
Reese street.	Oxford avenue and Friendship street.	Cleaned ditches
Scrabble alley.	Hargrove and Courtland streets.	Repaired pavement; large portion gutter relaid.
Stricker street.	Patterson avenue and Presstman street.	Repaired pavement.
Stansbury alley.	Mott and Monument streets.	Repaired pavement.
Saratoga street.	Holliday and North streets.	Repaired pavement gutter to gutter; large portion new gutter laid.
Shakespeare street.	Broadway and Bond street.	Repaired pavement curbs to rail; large portion new gutter laid.
Spring street.	Gough street and Canton avenue.	Repaired pavement curb to curb; small portion new gutter laid and curb reset.
Slingluff avenue.	Liberty road and Gwynns Run.	Patched macadam and cleaned ditches; paved cobble gutter on west side from North avenue to first alley northward.
Scott street.	Columbia avenue and Cross street.	Gutter relaid in places; new gutter laid about 50 feet; repaved in places from gutter to gutter; repaired pavement in places.
Stockholm street.	Intersection with Carroll street.	Paved throughout.
Stockholm street.	Intersection with Wicomico street.	New gutter laid about 80 feet; repaved along gutter.
Stockton street.	Riggs avenue and Winchester street.	Gutter relaid in places; repaired pavement.
Stockton street.	Pratt and Lexington streets.	Gutter relaid in many places; repaved in places from curb to curb; repaired pavement in places.
Stoddard alley.	Hoffman and McMechen streets.	New gutter laid in place about 500 feet; repaved in places from building line to building line; repaired pavement in places.

Small alley.	Myrtle avenue and Fremont street.	New gutter laid about 200 feet; old gutter relaid; repaved from curb to curb.
Saratoga street.	Carrollton avenue and Monroe street.	New gutter laid in places on north side about 270 feet; old gutter relaid in places on north side; repaved along gutter on north side.
St. Paul's Court.	St. Paul street and Lovegrove alley.	Gutter relaid; repaved from building line to building line.
Thames street.	Philpot, East and water's edge.	Repaired pavement; small portion gutter relaid.
Third avenue.	Chestnut avenue and Falls road.	Repaired pavement; small portion gutter relaid.
Temple street.	Baltimore and Fayette streets.	Repaired pavement; large portion new gutter laid and new curb set.
Tyson alley.	Madison and Richmond streets.	New gutter laid about 100 feet; old gutter relaid in places; curb reset in places; repaved from curb to curb for 150 feet north of Madison avenue; repaired pavement in places.
Twentieth street.	Oak street and Maryland avenue.	New gutter laid about 75 feet; old gutter relaid; curb reset in places; repaved from curb to curb.
Twentieth street.	Maryland avenue and Charles street.	Curb reset in places; repared pavement.
Twenty-first street.	Oak street and Maryland avenue.	New gutter laid about 130 feet; old gutter relaid in places; repaved from gutter to gutter.
Twenty-second street.	Maryland avenue and Charles street.	New gutter laid about 170 feet; old gutter relaid over greater part; curb reset in places; paved over unpaved portion; repaved in remaining portion.
Union avenue.	Falls road and Railroad avenue.	Repaired macadam and gutter on south side near Falls road.
Upton street.	Dolphin street and Lafayette avenue.	New gutter laid about 200 feet; old gutter relaid for greater part; repaved in part from building line to building line; repaved pavement in part.
Vincent alley.	Mulberry and Franklin streets.	New gutter laid about 90 feet; old gutter relaid about 10 feet; repaved from curb to curb; for about 100 feet north of Mulberry.

Streets, etc.	Between	Description of Work.
Vincent alley.	Lafayette avenue and Mosher street.	New gutter laid about 110 feet; old gutter relaid; repaved from curb to curb.
Vine street.	Stockton street and Carrollton avenue.	Portion of gutter relaid; portion of curb reset; repaired pavement.
Wolfe street.	Lanvale and Townsend streets.	Repaired pavement west side; large portion gutter relaid; small portion curb reset.
Wolfe street.	Fell and Aliceanna streets.	Repaired pavement.
West Falls avenue.	Block street and Canton avenue.	Repaired pavement.
Wehage street.	Covington and Henry streets.	Repaired pavement; large portion gutter relaid and curb reset.
Wolfe street.	Eager street and Ashland avenue.	Repaved from gutter to rail; large portion gutter laid and curb reset.
Wolfe street.	Ashland avenue and Monument street.	Repaired pavement; large portion new gutter laid and curb reset.
Watch-house alley.	Saratoga and Holliday streets.	Repaved from building line to building line.
Washington street.	North avenue and Twenty-first street.	A large portion of new gutter laid and rebut set; small portion new curb set.
Washington street.	Aliceanna and Gough streets.	Repaired pavement; small portion new gutter laid and curb reset.
Woodbrook avenue.	Clifton and Retreat streets.	Repaired pavement; small portion new curb set.
Wolfe street.	Bank and Baltimore streets.	Repaired pavement; large portion gutter relaid and curb reset.
Wehage street.	Henry street and Riverside avenue.	Gutter relaid in part; repaved in part from curb to curb; repaired pavement in part.
Windsor Mill road.	New Liberty road and west city limits.	Repaired macadam and cleaned ditches.
Woodward street.	Barre and Scott streets.	New gutter laid about 520 feet; old gutter relaid; curb reset in greater part; repaved from curb to curb.

Wilkens avenue.	Smallwood and Bentalou streets.	South gutter relaid in places; repaved along south gutter in places.
Woodyear street.	McHenry and Ramsay streets.	Repaved from gutter to gutter.
Woodyear street.	Franklin street and Edmondson avenue.	Repaved over sewer trench.
Wilmer alley.	Mosher and Smith streets.	New gutter laid about 70 feet; old gutter relaid in greater part; repaved from curb to curb.
Wilson street.	Madison avenue and Division street.	New gutter laid about 100 feet; gutter relaid in great part; repaved in greater part from curb to curb; repaired pavement in part.
Woodbrook avenue.	Fulton avenue and Retreat street.	Gutter relaid on west side; repaved along gutter.
Welcome alley.	Eutaw and Little Greene streets.	New gutter laid about 140 feet; old gutter relaid; curb reset for greater part; repaved from curb to curb.
Welcome alley.	Warner 200 feet west.	Gutter relaid; repaved building line to building line.
Warner street.	South Paca and Stockholm streets.	Repaired pavement.
West street.	Sharp street and B. & O. R. R.	Gutter relaid in part; repaved from gutter to gutter.
West street.	B. & O. R. R. and Ridgely street.	Repaired pavement.
York street.	Charles and Light streets.	New gutter laid about 300 feet; old gutter relaid; curb reset in great part; repaved along gutters.
York street.	Charles and Hanover streets.	New gutter laid about 20 feet; old gutter relaid in places; curb reset in places; repaved in part from curb to curb; repaired pavement in part.

The above list covers about 270 different streets on which work was done, amounting in cost for each job to $75 or more.

There is on record in the office a list of all places in the city where work was done of any kind by this Division of the Department, showing the locality and the amount of work done of the different classifications.

There were more than 1,200 different places on the streets, roads and alleys where work was done during the year.

The office and administrative force included Assistant Engineers B. Latrobe Weston and Joseph Greenbaum; Inspectors W. W. Stockham and John Ireton; Clerks J. H. Duvall and H. B. Soper.

Mr. Stockham resigned September 1st, and was succeeded by Mr. Ireton. Mr. Soper was employed June 21st, and transferred August 29th.

These gentlemen rendered valuable services, and I thank them for their industry and aid in the work of the year.

WORK IN THE BURNT DISTRICT TO AUG. 29, 1904.

On February 10, 1904, six gangs of men (150 in all) were organized as a part of the Department's force to clear the streets of the debris from the fire of February 7 and 8.

The force was increased afterwards as the circumstances required.

By your instructions, a way for teams was first cleared through the wreckage on the main streets. After the area, known as the "Burnt District," was opened to team travel on the main streets, these streets, and others, next in importance, were cleared from kerb to kerb; the debris being thrown on the abutting property. Afterwards team ways were opened through the alleys; the footways were cleared in front of lots, previously acquired by the Burnt District Commission, for widening streets, and some work done in opening lines for the City Surveyor along the new boundaries of widened streets.

The amount expended and chargeable to account of the "Emergency Fire Fund," was seventeen thousand one hundred and six ($17,106.69) dollars and sixty-nine cents, a detail of which follows:

Foremen (labor)....	397.3 days, at $3.00.....	$ 1,191 90	
Laborers	9,154.3 days, at $1.66 2-3.....	15,257 15	
Carters	4.7 days, at $2.50.....	11 75	
Blacksmith	1.1 days, at $3.20.....	3 59	
Total.....	9,557.4		$16,464 39
For tools.....		$ 24 04	
For clearing debris (special contract).....		70 00	
For lumber.....		427 29	
For United Railways and Electric Co. (pay rolls).		120 97	
Total			642 30
			$17,106 69

In the above named labor, there was expended:

For clearing the streets between kerb lines.....	$15,421 56	
For clearing footways in front of property owned by the city.....	528 99	
For clearing lines for City Surveyor.....	513 84	
		$16,464 39

GRADING AND PAVING IN THE BURNT DISTRICT.

On June 29, 1904, operations began in grading and paving.

In Light street, and the adjacent areas of those streets crossing Light street, where the fills from the new grade establishments were the greatest, the paving material was taken up, and piled in other streets, and on lots, where suitable space could be obtained.

At this time, rebuilding operations were well under way, and a large amount of excavated material was being hauled by contractors to the various dumps. Nearly all the material excavated from foundation sites and basements was good for street filling. Quite a demand was made by building con-

tractors for the privilege of dumping material in the streets to be raised to the re-established grades, and instead of being an expense to the city to obtain this material it was made a source of revenue. When grading began, privileges were sold, for a lump sum, to various parties to deposit material, on the basis of ten (10) cents per cubic yard.

From these sales two hundred and eighty-seven ($287.00) dollars was received.

After June 29, privileges to deposit material was sold by issuing tickets at ten (10) cents each, and were collected by the Department on receipt of one cubic yard of material deposited, as directed, for one ticket. Much of this material was used in filling what was formerly basement areas of buildings, but now lying in the new parts of widened streets. Up to August 29, there were 17,950 tickets sold—making a total of two thousand and eighty-two ($2,082.00) dollars received for privileges of depositing material on the streets to be raised to the new grade lines. There was also four hundred and eighty-seven ($487.00) dollars received from sale of old materials in the Burnt District.

The amount expended on account of grading and paving in the Burnt District up to August 29, and chargeable to the different streets, was twenty-two thousand one hundred and seventy-eight ($22,178.49) dollars and forty-nine cents.

ACCOUNT OF BALTIMORE STREET.

Flagstones	$ 83 40
Belgian blocks	2,258 40
Cement	636 75
Sand	435 09
Crushed stone	640 92
Gutter stone	329 80
Steel for concrete kerb	320 00
Concrete mixer and engine	725 15
Tools and hardware	186 13
Blacksmithing	49 88
Steel and iron machine work	101 21

Oil and gasoline		94 97
Lumber		193 96
Hauling		23 80
Freight and expressage		32 86
Drawing material, stationery and tape lines		55 40
Labor		8,156 01
New Belgian block paving,	14,739 sq. ft.	3,810 96
Belgian block repaving,	24,375 sq. ft.	1,023 75
Laying new flagstones,	278 sq. ft.	105 64
Laying old flagstones,	131 sq. ft.	10 48
New concrete kerb,	2,781 lin. ft.	2,465 06
New gutter stone,	1,100 lin. ft.	374 00
Old gutter relaid,	531 lin. ft.	21 24
Concrete mixer and gasoline engine		725 15
Tools		70 80
Blacksmithing		49 88
Lumber		193 96
Hauling		23 80
Freight and expressage		32 86
Drawing material, stationery and tape lines		55 40
Labor removing old blocks, kerb and gutter stone and grading		5,360 75
		$14,323 73

ACCOUNT OF LIGHT STREET.

Tools and hardware		$ 90 48	
Steel and iron machine work		24 00	
Oil and gasoline		7 00	
Lumber		33 88	
Freight and expressage		1 80	
Hauling		34 50	
Drawing material, stationery and tape lines		11 40	
Labor		2,758 59	
		$2,961 65	
Belgian block repaving,	15,915 sq. ft.		$ 668 43
Old flags relaid,	179 sq. ft.		14 32
Old gutter relaid,	496 lin. ft.		19 84
Old kerb reset,	438 lin. ft.		43 80
Labor removing old Belgian blocks, gutter and kerbstone and filling in Light street to grade			2,215 26
			$2,961 65

ACCOUNT OF LOMBARD STREET.

Tools	$ 10 43	
Labor	2,061 68	
	$2,072 11	
Belgian block repaving, 2,070 sq. ft.		$ 86 94
Gutter relaid, 124 lin. ft.		4 96
Kerb reset, 126 lin. ft.		12 60
Labor removing old Belgian blocks, kerb and gutter stone and filling street to grade		1,967 61
		$2,072 11

ACCOUNT OF SHARP STREET.

Lumber	$ 11 22	
Labor	955 36	
	$966 58	
Labor grading Sharp street, between Baltimore and German streets, and lumber for runways		$966 58

ACCOUNT OF GRANT STREET.

Labor	$324 53	
Old kerb reset, 180 lin. ft.		$ 18 00
Old gutter relaid, 142 lin. ft.		5 96
Labor filling street to grade and grading		300 57
		$324 53

ACCOUNT OF PRATT STREET.

Labor	$181 46	
Belgian block repaving, account of B. and O. R. R., temporary tracks, 3,678 sq. ft.		$181 46

On the following main streets, only, the paving material and kerb was removed from the streets' beds, and some grading done:

Balderston street	$ 33 23
Calvert street	239 74
Elliott street	63 46
Gay street	118 26
Mercer street	475 31
St. Paul street	50 49
Water street	331 86
Alley between Lombard and German and Charles and Light streets	36 08
	$1,348 43

Respectfully submitted.

J. A. PAIGE,
Ass't City Engineer.

REPORT OF

JOHN S. DOYLE

Assistant City Engineer.

1904.

WORK IN THE BURNT DISTRICT FROM AUGUST 29 TO DECEMBER 31, 1904.

CITY ENGINEER'S OFFICE,

BALTIMORE, MD., January 1, 1905.

SIR: I have the honor to present the following report of operations in the Burnt District between August 29, 1904, the date of my assignment to duty as Assistant Engineer in charge of the work of regrading and repaving that district, and the end of the fiscal year.

Upon assuming charge I found that work had been done as follows: In Baltimore street the concrete kerb had been constructed on the south side from Liberty street to Calvert street, and from South street to Gay street, excepting one return at Charles street, one at Holliday street, two at Postoffice avenue, and a short stretch near Gay street, and on the north side from the east side of Sharp street to Charles street, excepting one return at Little Sharp street.

The concrete base had been put in place on the south side from Liberty street to a point between Grant and Calvert streets, excepting across Charles street, and on the north side from the east side of Sharp street to Little Sharp street, and from the east side of Hanover street to Charles street.

The paving had been completed on the south side from Liberty street to a point between Light and Grant streets, and in the railroad tracks from Liberty street to Calvert street.

No paving had been done on the north side.

In Lombard street the paving materials had been removed between Charles street and Cheapside, the block from Charles street to Light street had been about half filled in, and that from Light street to Calvert street had been completely graded.

Kerbing had been set on both sides from Light street to Grant street and about fifty square yards of Belgian block paving had been laid on the north side near Grant street.

In Wine alley the grading had been completed from Light street to Wine alley.

In Mercer and Water streets, the grading had been completed to subgrade between Light and Calvert streets.

In Ligth street the grading had been done on the east side from Lombard street to Water street, on the west side from a point south of Wine alley to German street and entirely between German and Baltimore streets.

The old street bed had been partly graded between Pratt and Lombard streets.

Kerbing had been set on the east side from Lombard street to Water street, and from a point about fifty feet north of German street for a distance of about fifty feet northerly.

On the west side kerb had been set from a point south of Wine alley to German street, and from the north building line of German street to Baltimore street.

Belgian block paving had been laid on the west side from the north building line of German street to Baltimore street, and from the south side of German street to a point south of Wine alley.

The flag row at Baltimore street had been completed.

In Ellicott street the grading had been completed between Lombard and Water streets.

In Grant street the grading had been completed between German and Lombard streets, and 180 feet of kerb had been set.

In Hollingsworth street, the grading had been partly completed between Lombard and Water streets.

Since the 29th of August, last, work has been done on various streets as follows:

BALTIMORE STREET.

Concrete kerb has been set on the north side from east side of Charles street to North street, with returns at Little Sharp, St. Paul and Calvert streets, and on the south side from Calvert street to South street, a short stretch near Gay street, and returns at South and Holliday streets and Post Office avenue.

Total length, 902 feet.

Expended for labor	$681 53	
Expended for materials	304 88	
		$986 41
Cost per lineal foot for labor	.755	
Cost per lineal foot for material	.338	
		$ 1.093

The six-inch granite kerb has been reset, where necessary, from North street to the bridge on the north side, and from Gay street to the bridge on the south side.

Total length, 1,618 feet.

Expended for labor	$127 82
Cost per foot	.079

The grading has been completed on the north side from Charles street to Calvert street, and from the center of Holliday street to the bridge, and on the south side from a point fifty feet east of Grant street to Calvert street, and from the centre of Holliday street to the bridge.

The change of grade between Frederick street and the bridge has been accomplished without mishap of any kind, and with as little inconvenience as possible to the public.

Expended for labor $1,245 87

The six-inch concrete base has been laid on the north side from Little Sharp street to the east side of Hanover street; from the east side of Charles street to Calvert street, and from the center of Holliday street to the bridge, and on the south side from a point fifty feet east of Grant street to Calvert street, and from the center of Holliday street to the bridge.

Total area concreted, 4,170 sq. yards.			
Expended for labor	$ 520 63		
Expended for materials	1,379 59		
		$1,900 22	
Cost per sq yard for labor	.124		
Cost per sq. yard for material	.331		
			.455

New Belgian block paving has been laid on the north side from Sharp street to Calvert street and from the center of Holliday street to the bridge, and on the south side from a point one hundred feet west of Grant street to Calvert street, and from the center of Holliday street to the bridge.

The paving in the tracks of the United Railways and Electric Company has been relaid, by the city, from the center of Frederick street to the bridge; the said company having first put in a concrete base.

No repaving has been done in the railroad tracks between the centers of Holliday and Frederick streets.

Total area of new paving, 5,253 sq. yards.			
Expended for labor	$1,180 21		
Expended for materials	9,155 12		
		$10,335 33	
Cost per sq. yard for labor	.225		
Cost per sq. yd. for materials	1.742		
		$	1.967
Total area paved in railroad tracks, 946 sq. yards.			
Expended for labor	$283 80		
Expended for materials	49 00		
		$332 80	
Cost per sq. yard for labor	.30		
Cost per sq. yd. for material	.05		
			.35

GERMAN STREET.

The kerb and gutterstones, and Belgian blocks were entirely removed from this street, between Charles and Grant streets. From Grant street to a point one hundred and thirty feet east of Calvert street they have been removed from the south kerb

to the outside of the north rail of the north railroad track.

The grading has been completed between Charles and South streets, and the railroad tracks have been relaid.

The kerbing has been placed on both sides from Light street to South street, and the repaving has been done from a point fifty feet west of Calvert street to the east side of said street and also in the railroad tracks across Light street.

Expended for labor	$742 03	
Expended for material	6 95	
		$748 98

WATER STREET.

The paving materials have been removed from this street from Calvert street to South street, and from Gay street to Jones' Falls.

The grading has been completed from Calvert street to South street, and from Gay street to the east side of Centre Market Space.

Granite kerb has been set from Calvert street to Cheapside, and from Gay street to Frederick street on the south side.

Concrete kerb has been set on the north side from South street to Holliday street, and from Post Office avenue to Frederick street by day labor, and on the north side from Gay street to Frederick street by J. L. Robertson, under a written agreement by which the city furnished the steel armor, and the contractor constructed the kerb.

The cobble repaving has been completed from Gay street to Frederick street.

Expended for labor	$1,327 91	
Expended for materials	270 15	
		$1,598 06

WINE ALLEY.

The stone kerb has been set on both sides from Light street westerly a distance of one hundred and twenty-five feet.

The cobble paving has been completed for the same distance.

The paving materials have been removed from German street northward to the bend.

Expended for labor..... $39 62

LOMBARD STREET.

The filling has been completed from Charles street to Light street.

The kerb and gutter have been removed from Cheapside to South street, and the filling has been completed.

The debris has been removed from the city's part of the lots on the north side from Gay street to Centre Market Space.

Granite kerb has been set on both sides of the street from Charles street to Light street, and from Grant street to South street.

The United Railways and Electric Company has relaid its single track from South street to Charles street, and the street has been paved from kerb to kerb between these points.

Considerable trouble and delay to the work has been encountered on this street, caused by building materials deposited therein.

Expended for labor.....	$1,486 95	
Expended for materials.....	55 14	
		$1,542 09

BALDERSTON STREET.

The paving materials have been removed from this street from Charles street to Hollingsworth street.

The grading has been completed from Charles street to Hollingsworth street.

The kerb has been set on both sides from Charles street to Light street, and on the north side from Light street to Ellicott street.

Expended for labor..... $407 29

GUILFORD STREET.

New concrete kerb has been set on the north side from South street to Franklin lane by the property owner.

No expenditure.

SWAN STREET.

A part of the paving materials have been removed from this street.

Expended for labor..... $152 74

HAWK STREET.

The paving materials have been removed from this street, and the grading has been nearly completed.

Expended for labor..... $57 97

SHARP STREET.

Two lots have been filled in on the east side south of German street, and fences have been erected.

Expended for labor..... $12 89

LITTLE SHARP STREET.

The kerb has been reset and the street repaved from Baltimore street northward to the fire line.

Expended for labor..... $75 49

HANOVER STREET.

The kerb has been reset on the east side southward from Baltimore street for a distance of eighty-one feet.

Expended for labor..... $5 13

CHARLES STREET.

Concrete kerb has been set on the west side for a distance of ninety-five feet southward from Baltimore street.

Granite kerb has been set in front of Nos. 36 and 38 South, and the granite kerb has been reset on the east side from Lombard street to Balderston street.

Expended for labor	$69 24	
Expended for materials	56 02	
		$125 26

ST. PAUL STREET.

The debris has been removed to the old grade from the city's part of lots on the west side between Baltimore and Fayette streets.

Expended for labor	$80 72	

LIGHT STREET.

The grading has been completed from Baltimore street to Lombard street, the walls standing between Pratt and Lombard streets have been razed, and the grading has been completed to a point ninety feet north of Pratt street.

The remainder of the kerb has been set on both sides of the street between Baltimore and Balderston streets, on the west side from Balderston street to within ninety-five feet of Pratt street and on the east side to within two hundred feet of Pratt street.

The Belgian block pavement has been entirely completed from Baltimore street to a point two hundred feet north of Pratt street, excepting in the intersection of German street, where only the railroad tracks have been paved, and on the west side the paving has been completed to within ninety-five feet of Pratt street.

Expended for labor	$1,769 05	
Expended for materials	141 84	
		$1,910 89

ELLICOTT STREET.

This street has been filled in, and paved with cobblestones between Lombard and Balderston streets.

Expended for labor..... $66 75

GRANT STREET.

Stone kerb has been set on the west side from German street to Mercer street, and on the east side from Mercer street about half way to German street.

Paving materials have been removed and the grading has been completed from Lombard street to a point about two hundred feet north of Pratt street.

Expended for labor..... $121 47

CALVERT STREET.

All of the paving materials have been removed, and the grading, kerb setting, and Belgian block paving have been entirely completed from the north side of German street to Pratt street.

Eighty feet of armor were furnished the property owner who set concrete kerb on the east side north of Pratt street.

New concrete kerb has been set on the west side from Baltimore street to the north side of the Maryland Trust Building at the corner of German street.

Some of the debris has been removed from the city's portion of the lots on the east side between Baltimore and Fayette streets.

Expended for labor.....	$1,496 80	
Expended for materials.....	103 92	
		$1,600 72

CHEAPSIDE.

All of the paving materials have been removed and the grading completed from Water street to Pratt street.

The kerb has been set from Water street to a point one hundred and fifty feet south of Lombard street.

Expended for labor	$602 03	
Expended for materials	20	
		$602 23

FRANKLIN LANE.

All of the paving materials have been removed, and the grading has been completed from Lombard street to Water street.

The property owner at the northeast corner of Guilford street has set concrete curb for a distance of thirty-three feet.

Expended for labor	$97 11

SOUTH STREET.

Concrete kerb has been placed on the west side of this street from Baltimore street to a point one hundred and twenty-three feet southward; from German street to Water street, and from Guilford street to a point ninety feet south of said street.

The damaged granite kerb in front of the Safe Deposit Building has been repaired with concrete.

The property owner at the corner (northwest) of Guilford street set thirty-three feet of concrete kerb at his own expense.

Expended for labor	$209 51	
Expended for materials	126 36	
		$335 87

HOLLIDAY STREET.

The granite kerb has been reset on the east side from Baltimore street to a point one hundred and eighty feet southward.

Concrete kerb has been set on the east side from Water street to Exchange Place.

Expended for labor	$123 76	
Expended for materials	91 62	
		$215 38

COMMERCE STREET.

The debris has been removed from the city's part of the lots on the east side.

Expended for labor	$150 03

POST OFFICE AVENUE.

Concrete kerb has been set on both sides of this avenue from Baltimore street to Water street, and the gutters have been relaid.

Expended for labor	$381 75	
Expended for materials	265 71	
		$647 46

GAY STREET.

The granite kerb has been reset on both sides from Baltimore street to a point seventy feet southward and on the east side concrete kerb has been set under written agreement with J. L. Robertson for a distance of sixty-four feet northward from Water street.

Expended for labor	$11 58	
Expended for materials	34 11	
		$45 69

FREDERICK STREET.

The paving materials have been removed; the grading has been completed; the kerb set, and the cobblestone pavement relaid from Baltimore street to the alley north of Lombard street.

Concrete kerb has been set for a distance of sixty-six feet on the west side between Pratt street and Smith alley by the property owner, the city having furnished the armor. Concrete kerb has also been set, under written agreement with J. L. Robertson, from the northeast corner of Water street for a distance of sixty-four feet northward, and by the property owner

on the west side for a distance of about thirty feet northward from the alley north of Lombard street.

Expended for labor	$933 06	
Expended for materials	43 79	
		$976 85

HARRISON STREET.

The grading, kerb setting and paving have been completed from Baltimore street to the point northward at which the newly established grade intersects the old one.

Expended for labor	$219 13	
Expended for materials	19 04	
		$238 17

CENTRE MARKET SPACE.

The kerb and gutterstone and Belgian blocks have been removed from Lombard street to Water street on the west side and from Lombard street to Baltimore street on the east side, and the grading has been completed on both sides from Lombard street to Water street and partly completed on the east side between Water and Baltimore streets.

Expended for labor	$455 00	
Expended for materials	8 44	
		$463 44

CONCORD STREET.

The paving materials have been removed from Lombard street to Water street and the grading has been partly finished.

Expended for labor	$130 05

WEST FALLS AVENUE.

The debris in the bed of this street has been partly leveled down, and some old walls have been razed.

Expended for labor	$50 57

CONCRETE KERB.

Concrete kerb has been set in Baltimore, Calvert and South streets, Franklin lane, Guilford and Holliday streets, Post Office avenue, Water, Gay and Frederick streets.

All of that in Baltimore street, excepting on the south side between Calvert and South streets, has been constructed at night.

That in Charles street has been placed at night.

That on other streets has been put in in daytime.

The concrete has been mixed by hand in the proportions, one of cement, three of sand, and five of one-inch broken stone, and the armoring has been of the "Wainwright" type.

This kerb has been subjected to severe tests both on Baltimore and Water streets, and so far has given every indication of holding its own with the granite kerb.

The cost for labor is that for trenching, setting forms, mixing and putting in place.

The following table shows the number of feet constructed on each street, and the expenditure for same:

Street.	No. feet.	Cost per sq foot.			Expended.		
		Labor.	Mat'ls.	Total.	Labor.	Mat'ls.	Total.
Water	351						
Charles	95						
Calvert	135						
South	380						
Holliday	191						
Postoffice ave	758						
	1,910	$0.468	$0.338	$0.806	$893 85	$645 36	$1,539 21
Baltimore	902				681 53	304 88	986 41
		.755	.338	1.093			
	2,812	$0.560	$0.338	$0 898	$1,575 38	$950 24	$2,525 62

The last line shows the unit cost for the whole work; the next above, that for Baltimore street, and the next, that for streets other than Baltimore street.

Besides the kerb constructed by the city, 317 feet of concrete kerb have been constructed by J. L. Robertson around the National Marine Bank Building. The city having furnished the steel and the contractor having done the work.

Expended $152 00

Two hundred and eleven feet of kerb bar have been furnished to private parties who preferred to pay for the construction of the kerb rather than wait until the city could place it for them. In all cases the construction has been under the supervision of this Department.

Cost $31 65

GRADING.

Under the head of grading is included the razing of walls and parts of buildings standing in the new bed of widened streets, the removal of debris and paving materials from streets to be widened and graded, and the filling in and excavating of the street beds to subgrade. It has been impracticable to get at the unit cost of this kind of work.

When materials have had to be hauled it has been my effort to haul them to the nearest street to be filled and where walls were standing in streets to be filled and widened, they have been razed, and the debris leveled off before any filling from outside had been done.

Considerable paving materials have had to be stored as they were removed from streets to be graded, but whenever it was practicable to have another street graded and ready to receive them, they were hauled directly to it, thus saving storage and an extra loading.

Expended for labor..... $7,190 04

CONCRETE BASE.

The repaving in Baltimore street has all been over a six-inch concrete base.

That portion between the railroad tracks and the kerb having been placed by the city, and that in the tracks by the United Railways and Electric Company.

That placed by the city has been mixed by Smith concrete mixer, operated by a gasoline engine, in the proportions of one part of Portland cement, six parts of sand, and ten parts of two-inch and three-inch broken stone.

All of the concrete base west of Calvert street has been laid at night, but that east of Holliday street has been put in during the day.

The cost for labor includes the mixing and placing:

Expended for labor	$ 520 63	
Expended for materials	1,379 59	
		$1,900 22

BELGIAN BLOCK PAVING.

All of the paving in Baltimore street outside of the railroad tracks has been done with new Belgian blocks on a sand cushion over a six-inch concrete base. In all railroad tracks which have been repaved by the city, at its expense, the old blocks have been relaid.

All other Belgian block paving has been done with old blocks.

Cost for labor on Baltimore street is for placing the sand cushion, and hauling in and paving the blocks.

On the other streets the cost is for shaping the street to the required cross section and hauling in and laying the blocks.

Expended for labor on new blocks	$1,180 21	
Expended for materials on new blocks	9,155 12	
		$10,335 33
Expended for labor on old blocks	$2,931 11	
Expended for materials on old blocks	232 70	
		$3,163 81

COBBLESTONE PAVING.

Streets that had been paved with cobblestones have been repaved with the same material.

The cost per square foot for labor is for shaping the street to the required cross section and hauling in and paving the stone.

All of this kind of paving has been done with old stone.

Expended for labor	$821 96	
Expended for materials	17 16	
		$839 12

KERB AND GUTTER STONE.

The cost of setting kerb and gutter stones includes the cost of trenching and setting up the stones. All of the kerbstone, excepting about 800 feet, is of six-inch granite.

Expended for labor on kerbstone	$790 19
Expended for labor on gutter stone	234 82

FLAG.

The cost of flagstone work is that for labor setting it in place.

Expended	$200 40

STATEMENT OF EXPENDITURES.

UNDERGRADING, PAVING, ETC., BURNT DISTRICT FUND.

222,699 Belgian blocks at $62.50 per thousand		$13,918 68
19,272 Belgian blocks at $48.00 per thousand	$925 06	
Less freight	10 00	
		915 06
1,004.02 tons stone dust at 50c. per ton		502 01
69.49 cu. yds. crushed stone at $2.25		156 34
154.03 cu. yds. crushed stone at $2.00		308 08
51.99 cu. yds. crushed stone at $1.50		77 99
583.06 tons crushed stone at $1.10		641 37
Lumber, etc		22 62
Freight charges		34 20
Tools		20 90
Oils, etc		43 13
143 cu. yds. sand at $0.83¾		119 77
97 cu. yds. sand at $0.75		72 75
22 cu. yds. sand at $0.78		17 16
57 cu. yds. sand at $0.50		28 50
47.6 cu. yds. sand at $0.70		33 32
1,000 frogs at $0.04½ for concrete kerb		45 00
317 feet Armoured concrete kerb		104 45

9,790 feet kerb bar		1,466 70
Hardware, etc		7 83
Hauling Belgian blocks		84 42
Hauling plates		63 38
Hauling steel bars		4 00
Bending bars		7 00
400 bbls. Phoenix cement	$452 80	
113.75 bbls. Lehigh cement	151 53	
		604 33
Use of bed of Hanover street		100 00
Labor grading		7,190 04
2,812 lineal feet concrete kerb at $0.56		1,575 38
4,170 sq. yds. concrete base at $0.1248		520 63
5,253 sq. yds new Belgian block paving at $0.225		1,180 20
13,423 sq. yds. old Belgian block paving at $0.218		2,939 11
32,907 sq. feet cobblestone paving at $0.0249		821 96
11,741 lineal feet gutter stone set at $0.02		234 82
10,272 lineal feet kerbstone set at $0.0769		790 19
2,520 sq. feet flagstone set at $0.08		200 40
Salaries		1,085 00
Inspectors and watchmen		894 07
Total expenditure		$36,830 79

Recapitulation of the above amount:

Labor expended	$17,431 80
Materials expended	12,581 49
Materials on hand	6,817 50
Total	$36,830 79

Following is an itemized statement of expenditures:

BALTIMORE STREET.

Labor, pay rolls	$ 4,172 38
Cement	427 06
Hardware	3 00
Belgian blocks	8,858 74
Freight	17 70
Hauling	92 28
Frogs for kerb	13 28
Sand	183 12

Gasoline, oils, etc	43 15	
Lumber	2 60	
Bending kerb bars	3 00	
Stone dust	346 81	
Broken stone	976 11	
Kerb bar	270 45	
Grading		$1,245 87
902 lineal feet of concrete kerb		986 41
1,618 lineal feet of granite kerb set		127 82
3,615 lineal feet of gutter stone set		73 86
1,268 sq. feet of flagstone set		101 44
5,253 sq. yards new Belgian blocks paved		10,335 33
946 sq. yards old Belgian blocks paved		332 80
4,170 sq. yards six-inch concrete base		1,900 22
Gutter plates hauled to City Yard		92 28
Cleaning up		17 82
Ripraping at Liberty, Charles and Calvert		49 05
Hauling gutter stone to storage lot		29 60
Moving building materials from line of work		117 18
	$15,409 68	$15,409 68

GERMAN STREET.

Labor, pay rolls	$742 03	
Hauling	6 95	
Gutter plates sent to City Yard		$ 6 95
808 lineal feet of kerbstone set		63 83
518 lineal feet of gutter stone set		10 36
172 sq. feet of flagstone set		13 76
132 sq. feet of cobblestone repaired		3 96
403 sq. feet of Belgian blocks repaired		90 60
Grading		559 52
	$748 98	$748 98

WATER STREET.

Labor, pay rolls	$ 1,327 91
Hauling	9 19
Kerb bar	85 35
Frogs for kerb bar	7 68
Concrete kerb (agreement)	64 85
Broken stone	45 00

Bending kerb bar	2 00	
Hardware	1 20	
Cement	42 00	
Sand	9 21	
Lumber	3 67	
548 lineal feet of concrete kerb		$ 424 43
Grading		899 03
211 feet kerbstone set		17 67
540 feet gutter stone set		10 80
87 sq. feet of flagstone set		6 96
122 sq. yards Belgian blocks repaved		36 60
6,546 sq. feet cobblestone repaved		193 38
Gutter plates sent to City Yard		9 19
	$1,598 06	$1,598 06

WINE ALLEY.

Labor, pay rolls	$39 62	
264 feet of kerb set		$20 12
119 feet of gutter stone set		2 38
35 sq. feet of flagstone set		2 80
436 feet of cobblestone paved		14 32
	$39 62	$39 62

LOMBARD STREET.

Labor, pay rolls	$ 1,486 95	
Hauling	5 62	
Sand	28 50	
Lumber	2 60	
Stone dust	18 22	
Mason line	.20	
Grading		$ 283 25
1,971 lineal feet of kerbstone set		158 51
1,787 lineal feet of gutter stone set		35 74
535 sq. feet of flagstone set		42 80
4,921 sq. yards old Belgian block paving		1,016 17
Gutter plates sent to City Yard		5 62
	$1,542 09	$1,542 09

BALDERSTON STREET.

Labor, pay rolls	$407 29	
Grading		$333 09
713 lineal feet kerbstone set		60 64
77 lineal feet gutter stone set		2 31
Moving stone		11 25
	$407 29	$407 29

PRATT STREET.

Labor, pay rolls	$4 72	
25 sq. yards Belgian block paving repaired		$4 72
	$4 72	$4 72

SWAN STREET.

Labor, pay rolls	$152 74	
Grading		$152 74
	$152 74	$152 74

HAWK STREET.

Labor, pay rolls	$57 97	
Grading		$57 97
	$57 97	$57 97

SHARP STREET.

Labor, pay rolls	$12 89	
Barricades erected		$ 9 89
Grading		3 00
	$12 89	$12 89

LITTLE SHARP STREET.

Labor, pay rolls	$75 49	
142 lineal feet of kerbstone set		$12 78
99 lineal feet of gutter stone set		2 99
60 sq. feet of flagstone set		6 00
11 sq. yards Belgian block repaved		4 45
1,062 sq. feet cobblestone repaved		33 98
Grading		15 29
	$75 49	$75 49

HANOVER STREET.

Labor, pay rolls	$5 13	
81 lineal feet of kerb set		$5 13
	$5 13	$5 13

CHARLES STREET.

Labor, pay rolls	$69 24	
Hardware	50	
Hauling	4 88	
Cement	9 73	
Sand	2 51	
Broken stone	18 00	
Frogs	1 35	
Kerb bar	19 05	
Gutter plates sent to City Yard		$ 4 88
77 lineal feet kerbstone reset		6 81
Hauling kerbstone		10 67
95 lineal feet of concrete kerb		103 90
	$125 26	$125 26

ST. PAUL STREET.

Labor, pay rolls	$80 72	
Grading		$80 72
	$80 72	$80 72

LIGHT STREET.

Labor, pay rolls	$1,769 05	
Stone dust	136 98	
Lumber	2 60	
Mason line	20	
Hauling	2 06	
Gutter plates sent to City Yard		$ 2 06
Grading		759 95
867 lineal feet of kerbstone set		71 29
988 lineal feet of gutter stone set		19 76
138 sq. feet flagstone set		10 88
4,321 sq. yards Belgian block paving		1,046 95
	$1,910 89	$1,910 89

ELLICOTT STREET.

Labor, pay rolls	$66 75	
88 lineal feet of kerbstone set		$ 6 95
20 sq. yards of Belgian block paved		6 00
912 sq. feet of cobblestone paved		27 36
Grading		26 44
	$66 75	$66 75

GRANT STREET.

Labor, pay rolls	$121 47	
Grading		$112 62
88 lineal feet of kerbstone set		8 85
	$121 47	$121 47

CALVERT STREET.

Labor, pay rolls	$1,496 80	
Hauling	10 87	
Lumber	3 27	
Sand	4 19	
Crushed stone	25 42	
Mason line	20	
Cement	19 09	
Kerb bar	37 50	
Frogs	3 38	
1,408 lineal feet of kerbstone set		$111 43
1,330 lineal feet of gutter stone set		26 60
2,410 sq. yards Belgian blocks paved		593 26
Grading		666 85
225 lineal feet concrete kerb		191 71
Gutter plates sent to City Yard		10 87
	$1,600 72	$1,600 72

CHEAPSIDE.

Labor, pay rolls	$602 03	
Mason line	20	
Grading		$573 93
449 lineal feet kerbstone set		28 30
	$602 23	$602 23

FRANKLIN LANE.

Labor, pay rolls	$97 11	
Grading		$97 11
	$97 11	$97 11

SOUTH STREET.

Labor, pay rolls	$209 51	
Hardware	60	
Hauling	1 13	
Lumber	66	
Broken stone	33 75	
Cement	27 71	
Sand	9 21	
Frogs	2 30	
Kerb bar	51 00	
144 lineal feet gutter stone reset		$ 3 10
44 sq. yards Belgian blocks repaved		17 43
Removing old stone kerb		7 40
Gutter plates sent to City Yard		1 13
380 lineal feet of concrete kerb		306 81
	$335 87	$335 87

HOLLIDAY STREET.

Labor, pay rolls	$123 76	
Lumber	1 62	
Hardware	53	
Sand	5 87	
Cement	18 72	
Broken stone	24 75	
Frogs	3 38	
Kerb bars	36 75	
185 lineal feet kerbstone reset		$ 17 65
63 lineal feet gutter stone reset		1 89
483 sq. feet cobblestone repaved		16 56
Removing old granite kerb		7 40
191 lineal feet concrete kerb		171 88
	$215 38	$215 38

COMMERCE STREET.

Labor, pay rolls	$150 03	
Grading		$150 03
	$150 03	$150 03

POSTOFFICE AVENUE.

Labor, pay rolls	$381 75	
Lumber	3 00	
Sand	11 73	
Cement	60 00	
Hardware	1 00	
Bending kerb bars	2 00	
Broken stone	60 75	
Frogs for kerb bars	10 53	
Kerb bar	116 70	
756 lineal feet gutter reset		$ 15 12
160 sq. yards Belgian blocks repaved		34 91
758 feet concrete kerb		582 63
Removing old granite kerb		14 80
	$647 46	$647 46

GAY STREET.

Labor, pay rolls	$11 58	
Hauling	4 50	
Concrete kerb (agreement)	19 80	
Frogs for kerb	81	
Bars for kerb	9 00	
Gutter plates sent to City Yard		$ 4 50
60 lineal feet of concrete kerb		29 61
150 lineal feet kerbstone reset		8 39
113 lineal feet gutter stone reset		2 26
31 sq. feet cobblestone repaved		93
	$45 69	$45 69

FREDERICK STREET.

Labor, pay rolls	$933 06	
Lumber	2 60	
Concrete kerb (agreement)	19 80	
Mason line	20	
Frogs for kerb	2 29	
Bars for kerb	18 90	
60 lineal feet of concrete kerb		$ 40 99
Grading		227 91
991 lineal feet of kerbstone set		81 09
1,200 lineal feet of gutter stone set		24 00
132 sq. feet of flagstone set		10 56
40 sq. yards Belgian blocks paved		15 00
18,407 sq. feet of cobblestone paved		577 30
	$976 85	$976 85

HARRISON STREET.

Labor, pay rolls	$219 13	
Hauling	1 88	
Sand	17 16	
Grading		$ 25 00
Gutter plates sent to City Yard		1 88
249 lineal feet of kerbstone set		67 23
304 lineal feet of gutter stone set		7 60
80 sq, feet of flagstone set		8 00
5,258 sq. feet of cobblestone paved		128 46
	$238 17	$238 17

CENTRE MARKET SPACE.

Labor, pay rolls	$455 00	
Hauling	8 44	
Grading		$455 00
Gutter plates sent to City Yard		8 44
	$463 44	$463 44

CONCORD STREET.

Labor, pay rolls	$130 05	
Grading		$130 05
	$130 05	$130 05

WEST FALLS AVENUE.

Labor, pay rolls	$50 57	
Grading		$50 57
	$50 57	$50 57

MATERIALS ON HAND.

Material paid for, but not used	$6,817 50	
Belgian blocks		$5,975 00
Kerb bar		842 50
	$6,817 50	$6,817 50

STORAGE.

Storage	$100 00	
Rent for use of bed of Hanover street		$100 00
	$100 00	$100 00

TOOLS.

Labor and materials repairing gasoline engine.....	$20 90	
Labor		$14 05
Batteries		6 00
Packing		25
Wrench		60
	$20 90	$20 90

INSPECTION OF MATERIALS, WATCHMEN, ETC.

Labor, pay rolls	$894 07	
Watchmen		$477 06
Inspectors		417 01
	$894 07	$894 07

SALARIES.

Pay rolls	$1,085 00	
Assistant Engineer		$ 525 00
Engineer Assistant		192 50
Rodman		192 50
Clerk		175 00
	$1,085 00	$1,085 00

REVENUE.

Considerable revenue has been obtained from the sale of old materials and dumping privileges.

Twenty-four thousand nine hundred and fifty dump tickets, each giving the holder space to dump one cart load of material at time and place designated by the Department, have been sold, each at the rate of 10 cents, yielding a revenue of $2,495.00, for which the Burnt District Fund got no credit.

It seems unfair that the Burnt District Fund should expend money handling the material delivered, and then get no credit from the income therefrom.

I should recommend, if it is legitimate to do so, that the money obtained by the sale of these tickets be credited to ac-

count of Private Paving and Inspection, and that the Department be permitted to draw on it for labor expended in receiving the material.

As property has been turned over to this Department by the Burnt District Commission, an effort has been made to sell the old walls and the debris thereon. In almost every case prices have been gotten from several people before making the sale. All sales have been made to the party offering the highest price.

Following is a table showing the location of such sales, the nature of material sold, the price obtained and the name of the purchaser:

Location.	Nature Materials Sold.	Price.	To Whom Sold.
301 McElderry's Whf	Old building materials	$ 30 00	E. Foreman.
214 South st	" " "	25 00	T. B. McAllister.
233 Smith's whf	" " "	20 00	H. Weinefeld.
103 W. German st	" " "	25 00	B. McMahon.
111 Commerce st.	" " "	10 00	J. A. Lanahan.
107 W. German st	" " "	5 00	H. Weinefeld.
107 Commerce st	" " "	10 00	Baltimore Sand and Cement Co.
German, between Sutton and Sharp sts	Old iron	15 00	L. Holland.
German and Sharp sts	Old rags	4 00	B. Rotmanskey.
109 W. German st	Old building materials	15 00	H. Weinefeld.
111 W. German st	" " "	25 00	B. McMahon.
105 W. German st	" " "	15 00	B. McMahon.
9 and 11 W. German st., bet. old and new building lines	" " "	35 00	B. McMahon.
121, 123, 125 Commerce st., bet. old and new building lines	" " "	30 00	Wm. Zimmerman.
112 Light st	" " "	35 00	B. McMahon.
West side Light st., bet. German and Baltimore, intersection Light and Balderston sts., West side of Light st., bet. Lombard and Balderston sts.	Old iron	125 00	H. Wehr & Co.
17 W. German st	Old bricks	25 00	Leon Greenbaum,
122 Light st	Old building materials	25 00	Geo. W. Hill.
Lots on north side 600 block east side E. Lombard st	" " "	40 00	J. W. Walker.
Water st	17 perches cobblestone at $0.50 and 200 cu. yds. debris at $0.10	28 50	J. Chas. Linthicum

113 W. German st., bet. old and new southern building lines	Old building materials	35 00	B. McMahon.
21 Sharp st., bet. old and new southern building lines of German st	" " "	75 00	Joeckel & Hill.
101 and 103 W. Fayette st	For privilege of dumping in cellars	12 00	Geo. W. Howser.
S. W. cor. German and Hanover sts	Old building materials and refilling	75 00	H. S. Rippel.
Total		$739 50	

Any old materials, such as I beams, lintels, etc., found on city property, and which might be useful in the construction work of the Department, have been sent to the City Yard.

GUTTER PLATES.

Gutter plate construction has been abandoned at the intersections of Baltimore and Charles streets, Baltimore and Gay streets, Baltimore and Harrison streets, German and Light streets, German and Calvert streets, Lombard and Calvert streets, and Water street and Marsh Market Space.

The plates, to the number of ninety-three, have been sent to the City Yard.

Expended for hauling..... $63 38

PRIVATE PAVING AND INSPECTION.

Several pieces of work have been done under this account, the bills have been rendered and the charges made as follows:

Nature of work.	For.	Cost.
Repaving in Baltimore st	The Consolidated Gas Co...	$2 93
Repaving in Baltimore st	John Waters	2 78
Concrete curb and gutter stone at American Building	George A. Fuller Co.....	212 93
Setting curb for driveway in Calvert st.....	Deford Co.....	11 67
Removing debris from sidewalks..	Harbord Board.....	32 12
Repaving in Frederick st	N. B. Lobe.....	1 76
Repaving in Frederick st	H. C. Bowman.	2 64
		$266 83

Considerable delay and much difficulty has been encountered from the storage of building materials so as to obstruct the work.

In some cases these materials have been removed by the builders on very short notice, but as a general rule it has been necessary to keep constantly after them, and then to call on the police to have the street cleared.

In several cases it has been the apparent intention of the builder to impede the city work until he could finish his own.

On Baltimore street alone, the Department has been put to the necessity of expending one hundred and seventeen ($117.18) dollars and eighteen cents removing bricks, lumber, etc., stored in the way of the grading and concrete foundation.

There has necessarily been considerable instrumental work in the Burnt District, as all kerb lines have had to be re-established, grades given and fill, excavation and street sections staked out. This and the clerical work in the office have been efficiently performed by my assistants.

Respectfully submitted,

JOHN S. DOYLE,
Assistant Engineer.

To Mr. B. T. Fendall,
City Engineer.

ANNUAL REPORT

... OF THE ...

Sub-Department of Health,

DEPARTMENT OF PUBLIC SAFETY,

... TO THE ...

Mayor and City Council of Baltimore,

... FOR THE ...

Fiscal Year Ended December 31, 1904.

BALTIMORE, MD.
WM. J. C. DULANY CO.,
CITY PRINTERS.

1905.

OFFICERS AND EMPLOYES

. . . OF THE . . .

Department of Public Safety,

Sub-Department of Health.

JAMES BOSLEY, M.D., - - - - Commissioner of Health
C. HAMPSON JONES, M.D., - - - Asst. Commissioner of Health
SYDNEY O. HEISKELL, M.D., - Asst. Com'r of Health (Quarantine)
THADDEUS W. CLARKE, M.D., - - Asst. Quarantine Physician
J. W. M. KIGER, - - - - - Secretary Department of Health
ARTHUR D. THOMPSON, - - Asst. Secretary Department of Health
WILLIAM ROYAL STOKES, M.D., - - - - - - Bacteriologist
GUSTAV W. LEHMANN, PH.D., - - - - - - - Chemist
NICHOLAS G. KIERLE, M.D., - - - - . Medical Examiner
B. P. MUSE, M.D., - - - - - - Asst. Medical Examiner
WM. H. MITCHELL, - - Inspector of Plumbing and Drainage
C. I. PUTTS, JR., JOHN WARD, J. H. PUMPHREY, M. E. HORN,
Asst. Inspectors of Plumbing and Drainage
FRANCIS A. EBBERTS, - - - - - - Inspector of Drains
FRANCIS X. JENKINS, - . - - - - - - Nuisance Clerk
HARRY C. ANDREWS, - - - - - - - . - Permit Clerk
GEORGE C. WEDDERBURN, - - - - - - Registrar's Clerk
CHAS. A. WALL, M. H. LAIB, - - - - - - Index Clerks
W. P. STUBBS, M.D., - - - - - - Inspector of Throats
GEORGE F. SCHULTZ, - - - - - - - Inspector of Dairies
W. B. ROTH, CHAS. KNELL, H. G. WILSON, G. J. FISCHER,
and E. C. COOPER, - - - - - - - - Inspectors of Food
R. L. WEBER, - - - - - - - - - Inspector of Bakeries
J. A. CAMPBELL, - - - - - - - - - Laboratory Clerk
ELEAZER GOLDBERG, - - - - - - Commissioner's Clerk
PATRICK R. GLYNN, - - - - - - - Keeper of Morgue
WM. E. WOODALL, - - - - - - Maker of Disinfectants
CHARLES BUSICK and GEORGE W. PHILLIPS, - - Disinfectors
E. F. KELLY and AUGUST RITTMILLER, - Drivers of Funeral Wagon
JOHN B. WEILAGE, JOHN JOHNS, GROVER BENSER
and GEORGE KARL, - - - - - - - Laboratory Assistants
JAMES BATCHEN, - - - - - - - - Telephone Operatro

List of Health Wardens.

Wds.	Names	Addresses.	Office Hours. A.M.	P.M.
1.	Dr. J. W. Williams....	1114 Chesapeake Street		6–8
		410 S. Patterson Park Ave	8–10	7–8
2.	Dr. H. A. Laroque.....	600 S. Wolfe Street	8–10	7–8
3.	Dr. J. Rosett.....	1400 Gough Street	8–10	7–8
4.	Dr. H. K. Gorsuch.....	207 N. Liberty Street	8–10	7–8
5.	Dr. J. E. Heard.....	202 Aisquith Street	8–10	7–8
6.	Dr J. T. Spicknall...	14 N. Patterson Park Avenue	8–10	7–8
7.	Dr. A. S. Gage.....	1716 E. Madison Street	8–10	7–8
8.	Dr. J. W. France.....	1407 N. Gay Street	8–10	7–8
9.	Dr. C. T. Buckner.....	1337 E. North Avenue	8–10	7–8
10.	Dr. E. H. Hayward...	1003 E. Eager Street	8–10	7–8
11.	Dr. C. Van Bibber.....	9 E. Read Street	8–10	7–8
12.	Dr. T. L. Richardson.	211 W. Twenty-fifth Street	8– 9	6–8
13.	Dr. D. S. Williams....	254 Carroll Street (Woodberry)	7– 9	5–7
14.	Dr. Wm. Caspari.....	1631 Madison Avenue	8–10	7–8
15.	Dr. J. L. Ridgely.....	Forest Park	8–10	7–8
16.	Dr. Geo. B. Scholl...	1005 W. Lanvale Street	7– 9	6–8
17.	Dr. G. W. Hemmeter.	1114 Myrtle Avenue	7– 9	6–8
18.	Dr. R. A. Warner....	873 W. Lombard Street	8–10	6–8
19.	Dr. M. G. Smith.	1628 W. Lexington Street	8–10	6–8
20.	Dr. H. J. Hahn.....	Irvington	8–10	6–8
21.	Dr. A. D. Driscoll....	757 McHenry Street	8–10	6–8
22.	Dr. A. T. Chambers..	614 S. Paca Street	8–10	6–8
23.	Dr. C. P. Erkenbrack.	1412 Light Street	8–10	6–8
24.	Dr. L. J. Turlington.	120 Fort Avenue	8–10	6–8

REPORT

. . . OF THE . . .

Commissioner of Health.

REPORT.

BALTIMORE, January 1, 1905.

To the Honorable the Mayor

and City Council of Baltimore.

GENTLEMEN: In accordance with the requirements of law I have the honor to submit the report of the Sub-Department of Health, Department of Public Safety, for the year ended December 31, 1904. In an estimated population of 457,000 white persons and 84,000 colored persons the death rate per thousand was for the whole population 19.26, compared with 18.30 for the preceding year. The deaths included 4,271 white males, 3,825 white females, 1,383 colored males and 1,339 colored females; total white and colored, 10,818.

The death rate per thousand of the white population was 17.02, and the colored population 31.44, an increase of 0.95 per thousand for the former, and 1.99 per thousand in the latter.

The births reported were: White males, 3,538; white females, 3,325; colored males, 906; colored females, 830; total white and colored, 8,599; still-births, 710.

The birth rate per thousand of the population was: Whole 15.90; white, 15.02; colored, 20.67. The returns of births are incomplete and unsatisfactory, it being estimated by this department that not more than 65 per cent. of the births occurring in the city are reported to the Registrar of Vital Statistics. An ordinance of the Mayor and City Council requires physicians and mid-wives to make monthly returns of births, and until they comply with the terms of this ordinance it will be impossible to arrive at any definite conclu-

sions concerning the birth rate of the city. The failure of physicians and mid-wives to make prompt returns of births very often works great hardships on the young. This is particularly true in the cases of boys and girls who have gone to other cities to find employment, and who are required to show that they have passed the age of fourteen years. Almost daily requests are made for transcripts of births which we are unable to furnish.

The deaths in hospitals and other institutions numbered 1,791, an increase of 103 over 1903. The Coroners' inquests numbered 1,231 and 46 official autopsies were held. The non-residents who died in the city were: White, 317; colored, 81; total, 398.

The principal causes of death were: Tuberculosis, 1,505; pneumonia, 1,121; diseases of the heart, 815; Bright's disease, 749; diarrhœa, under five years of age, 671; cancer, 450; accidents, 361; bronchitis, 287; typhoid fever, 199; scarlet fever, 143; influenza, 122; diphtheria, 115; suicides, 81; the total mortality of children under five years of age was 3,155.

The marriages reported were 5,438, a decrease of 155 compared with 1903.

GENERAL SEWERAGE.

I feel that I cannot too strongly urge the importance of the immediate construction of a satisfactory sewerage system for Baltimore. Year after year this department has pointed out the necessity of a sewerage system, and now that the necessary legislation has been secured from the General Assembly to float a loan for the purpose it is to be hoped that early action will be taken.

That Baltimore has grown to be one of the most important cities of the country without having a sewer system is largely due to its topography. Built on rolling land, storm water has easily carried off, and with it has been carried large

quantities of filth that otherwise would decay and create conditions dangerous to health, and offensive to the sense of smell.

Unfortunately, we have a harbor into which nearly all of the storm water and its accompanying filth flows. This harbor is devoid of water currents, if we except the action of the tides, and the result is that each year a large volume of organic matter is deposited in its bed. So long has this continued, and so great has been the volume of matter discharged, that in warm weather the harbor becomes very offensive. It is possible that many of us have become so accustomed to the smell that we pay but little attention to it; but the fact remains that it must, in the nature of things, be a menace to the health of people doing business or living along the shores of the harbor. The neglect of the city in providing a sewer system and thereby preventing the conditions which exist in the harbor has created the impression in visitors to the city, who come by the water routes in warm weather, that we are a careless people, indifferent to health and of unclean habits. That the contrary is true goes without saying. If Baltimore is to become a greater city, it is important that measures be taken to protect the health of our people, and at the same time convince visitors, many of whom are business men and manufacturers desirous of locating here, that the greater Baltimore is soon to be in such sanitary condition that even the most fastidious shall have no cause to complain.

The condition of the harbor is not the only evil that will be remedied by the construction of a sewer system. It is estimated that within the limits of the city there are no less than 90,000 earth closets. These closets are constantly filling and their contents flowing into the alleys, and thence into the streets. At times the stench arising from fecal matter flowing in the gutters is easily perceptible and often very offensive. That such a condition is a menace to health cannot be questioned. It is well known that the transmission of disease

is often accomplished by flies and mosquitoes. Every one knows that flies swarm wherever there is refuse matter undergoing decomposition. The earth closets in every case being very close to the dwelling house, it is evident that there is great danger of poison being carried by flies.

That mosquitoes breed wherever there is a collection of stagnant water is well demonstrated, and they are numerous near cesspools. Scientific observers have conclusively shown that mosquitoes are active agents in the transmission of disease germs, and that if malaria is to be obliterated from large cities, the mosquito must be prevented from breeding. As long as cesspools are permitted to exist it will be impossible to exterminate them.

THE PREVENTION OF BREEDING OF MOSQUITOES.

As stated above, it is recognized that the mosquito is the most important agent by which malaria is transmitted. This is no longer capable of dispute. It has also been shown that with proper precautions the mosquito can be exterminated. Construct a sewer system, fill up all cesspools and use petroleum oil on all pools of stagnant water and marshy places, and at the same time do away with rain barrels, and see that bottles, cans, etc., are not permitted to lie around partly filled with water. If these precautions are adopted, our city will soon be rid of the pests, health conditions will be improved and our sleep will be no longer interrupted.

It is with pleasure that I report that small-pox, which early in the year bade fair to create a serious condition, has been stamped out. During the year sixty four cases were treated at the pest house at Quarantine, of whom four died. Fifty-seven cases developed in the city; five were taken from steamships, two were brought from Baltimore county and one remained over from last year.

When we consider that small-pox has been practically epidemic in several cities and towns within a few hours ride

of Baltimore, our citizens are especially to be congratulated that the disease did not reach an epidemic form. That we escaped so easily is due principally to the wholesale vaccination required by this department. Realizing early in the year the importance of keeping up the work of vaccination, which was begun four years before, the entire staff of health wardens, each a practising physician, was required to pay especial attention to this work, and in addition a corps of physicians was employed to devote at least eight hours daily to vaccination. To these two forces was added the co-operation of the physicians of the city who vaccinated thousands in their private practice. That the work was thoroughly done was demonstrated last fall when the schools reopened. At that time the principals of all the public schools were requested to send to the department lists of all school children who were either not vaccinated or who had unsatisfactory scars. Reports were received from all the schools by the last of September, and a careful analysis showed that not more than five per cent. of the pupils were in need of vaccination.

INSPECTIONS OF PLUMBING AND DRAINAGE.

The division of plumbing and drainage was confronted with the most serious problem in its history early in the year. The great fire of February 7, 1904, compelled hundreds of business and professional men to seek accommodations in dwelling houses, nearly all of which were inadequately provided with toilet facilities and sanitary plumbing. The demand on the department for permits and inspections suddenly assumed such proportions that it became necessary to increase the force of inspectors, their salaries being provided for by the Board of Estimates. With the growth of improvements in the Burnt District the work of the division was increased, but by constant attention to duty the small force of inspectors was enabled to keep abreast of their work. It will be necessary to continue at least another year with the increased force.

HOSPITAL FOR MINOR INFECTIOUS DISEASES.

I feel that I would be derelict in my duty should I fail to again call your attention to the importance of the establishment of a hospital for the care of minor infectious diseases; viz., scarlet fever, diphtheria and measles.

It is to be regretted that Baltimore is behind cities of less importance in this respect, and almost every day the need of such an institution is demonstrated. Baltimore is rapidly becoming a city of apartment houses and family hotels. Very frequently cases of diphtheria, scarlet fever or measles develop in such places to the terror of mothers in other apartments, and the great distress of the parents of the stricken one. There is absolutely no place where children suffering with either of these diseases can be removed, and some provision should be made without delay.

In the past year we have had 1,241 cases of diphtheria with 114 deaths; 1,222 cases of scarlet fever with 144 deaths; 343 cases of measles with 6 deaths. I am convinced that with a properly equipped hospital for the care of these diseases the reported numbers of cases and resulting deaths would have been materially decreased.

There seems to be a mistaken impression in the minds of a great many people in Baltimore as to the scope and work of a hospital of this character. Many people are under the impression that such a hospital will be used for small-pox and other virulent infectious diseases. This is not true. The only diseases to be treated in the hospital will be such as are named above.

In Boston, Mass., one of the pioneer cities, in establishing a municipal hospital for infectious diseases considerable opposition developed as to its location in thickly settled neighborhoods. This, however, was overcome and the hospital was constructed in a section of the city that compares very favorably with Eutaw Place in this city. For a time little use was made of the hospital, parents preferring to have their

children treated in their own homes. Later the value of the institution was appreciated, and to-day the hospital facilities are inadequate to care for all who apply for admission.

It is earnestly to be hoped that within a few months at the farthest some progress may be made in the establishment of a municipal hospital for infectious diseases, which has been urged by Commissioners of Health for the past twenty-five years.

PAVING AND REPAVING OF ALLEYS.

I would respectfully recommend that an ordinance be adopted giving the Commissioner of Health authority to direct the City Engineer to pave and repave alleys whenever in his opinion it may be necessary. One of the most potent factors in the spread of disease is the condition of many of the alleys, which, as a rule, are badly paved with cobble stone. By the continual tracking of heavy wagons and carts these alleys have been filled with ruts which have become receptacles for all manner of filth. Flies swarm there in summer, and if any disease germs exist, they are liable to be carried into houses, whence they find their way into the systems of the occupants.

This department is continually notifying property owners to regrade and repave alleys. While the notices are complied, sometimes after recourse to the courts the work in done in a haphazard manner, and in a few weeks the conditions are as bad or worse than before. If this department had the authority to direct the City Engineer to do the work, it would be done in a systematic manner with either belgian blocks, asphalt blocks or vitrified bricks, which would present a surface that would be readily cleaned by rain water or which could easily be flushed with water from hydrants. A provision should be made in the ordinance that the cost of repaving should become a lien on the abutting property.

CANCER.

This year we present a summary of the deaths due to cancer during the past fourteen years as a preliminary report of what we hope to produce, *i. e.*, a determination of the increase, if any, of cancer in Baltimore. The detail work that will be required in such an effort will be made possible only after a careful census of the citizens is taken by the Police Department, which we hope will be done in the first two months of 1906.

According to the United States census of 1890 our city contained 434,439 people; in 1891, by adding 7,452 as an average increase, had 441,889, and in 1900, 508,957 people. According to the population in 1891 we had one death due to cancer in 1,972 citizens, while in 1900 we had one death in 2,011, which indicates a decrease.

It will be better, perhaps, if we make a comparison of all the years of the decade, adding 7,452 to the population of the previous year until 1901, and then take the estimated population for each year in round numbers.

	Population	No. of Deaths.	Rate Per Persons Living.
1891	441,889	224	One in 1972
1892	449,341	183	One in 2445
1893	456,793	207	One in 2206
1894	464,245	196	One in 2368
1895	471,697	246	One in 1917
1896	479,149	276	One in 1736
1897	486,601	259	One in 1878
1898	494,053	256	One in 1933
1899	501,505	280	One in 1798
1900	508,957	253	One in 2011
1901	518,000	299	One in 1732
1902	525,000	311	One in 1366
1903	533,000	311	One in 1713
1904	541,000	375	One in 1442

If we divide this table into three sections of five, five and four years, respectively, we have the following:

	Total Population.	Total Deaths.	Rate Per Persons Living
1891–1895	2,283,965	1,056	One in 2,162
1896–1900	2,470,265	1,324	One in 1,865
1901–1904	2,117,000	1,296	One in 1,634

This last table indicates an increase in the number of deaths due to cancer; but as I have not the actual number of people living at the cancer age, the actual increase, if any, cannot be determined now. This increase, if any, seems to be principally in cancer of stomach and liver, as shown in Table No. 6.

The first five years give 302 deaths.
The second five years give 364 deaths. } Cancer of Stomach.
The last four years give 363 deaths.

The second five years show an increase of 62 deaths over the first five years, and the last *four* years show within one death of the number for the previous *five* years.

The first five years give 90 deaths.
The second five years give 144 deaths. } Cancer of Liver.
The last four years give 162 deaths.

Or the last *four* years show an increase of 22 deaths over the previous *five* years, and they an increase of 54 deaths over the first five years. Now this increase may be due to one of three things:

First. An actual increase of primary invasions of the stomach or liver.

Second. To secondary invasion of these organs after operation on breast or uterus.

Third. Greater care and knowledge of the physicians producing more accurate diagnoses.

Yet when we examine the list of deaths due to cancer of breast and uterus we find that there is also an apparent increase in spite of the fact that many cases of cancer of the breast or uterus are successfully and permanently removed.

The first five years give 152 deaths.
The second five years give 148 deaths. } Cancer of Breast.
The last four years give 156 deaths.

Or with the average number of deaths added for 1905 we will have an increase of 47 deaths over the second five years.

Cancer of the uterus, however, does not show so great an increase.

The first five years give 204 deaths.
The second five years give 258 deaths.
The last four years give 218 deaths.
} Cancer of Uterus.

This shows (when we add the average increase for 1905) 272 deaths, an increase of 14 deaths for the third five years.

It is interesting to note the disproportion of the whites and negroes affected by this disease, the negroes apparently being less susceptible. As I do not know the number of negroes living between twenty and seventy years of age, and also the average age of the negro at death, I can only draw attention to the fact that while there are 86,000 negroes and 464,000 white people in Baltimore, or a little more than one-sixth of the entire population, yet they show about one-ninth of all the deaths due to cancer. While it is an acceptable explanation of this difference in the two races to say that perhaps the negro does not average as high in the cancer age as the white people, yet it is certainly true, as shown in Table No. 2, that average age at death (due to cancer) of the negro is much less than that of the white people—49.454 years as compared with 57.689 years.

A careful examination of Table No. 3 will demonstrate, I think, the far less frequent occurrence of cancer in the negro of those portions of the body where we usually have epitheliomata.

The distribution of the red dots on the map showing the location of deaths is singularly uniform throughout the entire city. Certain blocks, or rather one side of a block, of houses show an unusual number of houses in which death from cancer has occurred; yet so far in the investigation no "cancer houses" have been demonstrated.

TUBERCULOSIS.

Another year has added its number 1,473 of dead due to tuberculosis, a greater number than any previous year. In my judgment a very large number of deaths charged to pneumonia and broncho-pneumonia have really tuberculosis as the primary infection. Pneumonia caused the death of 892; broncho-pneumonia 289, making a total of 1,181. I cannot say how many should be transferred to the tuberculosis account, but I can say that 2,654 died of affection of the lungs and bronchial tubes.

That which will lessen tuberculosis will certainly lessen pneumonia and broncho-pneumonia, except when they are terminal affection of epidemics. As yet the city has done nothing toward preventing these diseases. The Visiting Nurses, the Charity Organization, the Johns Hopkins Hospital and other organizations are doing what they can in caring for the sick, instructing the sick and the well how to care for themselves, and by having the premises disinfected by the Health Department; but the city itself has done nothing.

It seems to me that our work should be directed towards the prevention of the infection of the children. The city probably can do but little for those who are now infected and are still able and must work for a living. The "Fresh Air" Organization should be encouraged in its work so that a greater number of children could be sent to the country and kept there for a longer time each year. Such organizations should receive municipal aid because the work that is done by them strengthens the children to resist disease. The work of Children Playground Association should be similarly encouraged for the same reason. Such organizations remove children for a time from the usual unfavorable environments of their homes and surround them with sunshine and good influences. But in addition to these good works it is incumbent upon the city to provide a sanitarium for those who are sick, also ample and numerous playgrounds for the children.

The section of the city where tuberculosis is greatest in amount there we find less playground area, dirty, dusty streets and foul smelling gutters and alleys only are available. I am in hopes that the information that will be afforded by a special police census will enable me to more clearly specify the regions of the city that especially need such playgrounds.

Tuberculosis is not going to be stamped out by prayers and alms giving alone, but by definite work by the city to give the young a chance to grow to adult age with robust health to enable them to do their life work. Such work by the city will also lessen poverty and lessen expenses in the care of the sick and paupers.

I desire particularly to call your attention to the report of Dr. S. O. Heiskell, Assistant Commissioner of Health at Quarantine, and his recommendations for a new Quarantine tug, for, as stated in his report, the vessel now in use was purchased over twenty years ago and is in such condition that large sums are necessarily expended annually for repairs. In addition the boat is hardly large enough for its purposes. I respectfully recommend that an appropriation, not to exceed $25,000, be made for the purchase of a new and larger boat and to be equipped with an up-to-date fumigating plant.

In conclusion, I want to thank all of the employes of this department for their cordial co operation and support in my efforts to improve the sanitary conditions of the city and prevent the spread of epidemic diseases.

Yours respectfully,

JAMES BOSLEY, M.D.,

Commisssioner of Health.

REPORT

— OF THE —

Assistant Commissioner of Health.

REPORT.

JAMES BOSLEY, M.D.,
Commissioner of Health.

DEAR SIR: I submit to you for your consideration four maps showing location of deaths due to cancer, tuberculosis, pneumonia and typhoid fever.

The cancer map shows the location of deaths for the past fourteen years, 1891-1904, inclusive. I did not commence at an earlier date because annexation of the city "Belt" was in 1888, and subsequent to that the houses were renumbered, which would make it very difficult to adjust the recorded residences previous and subsequent to the renumbering. I have constructed eight tables from the data obtained. They are as follows:

TABLE No. 1—SUMMARY.

	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	Total
Total deaths.....	224	183	207	196	246	276	259	256	280	253	299	311	311	375	3,676
" whites	200	160	190	174	215	250	229	222	245	221	270	275	285	331	3,267
" negroes.....	24	23	17	22	31	26	30	34	35	32	29	36	26	44	409
" males.....	*68	58	73	*43	88	98	88	91	95	69	101	114	x103	127	1,216
" females..	155	125	134	152	158	178	171	165	185	184	198	197	206	248	2,456
" married.....	128	108	105	104	132	151	133	137	134	141	162	169	176	190	1,970
" single	21	19	27	17	29	30	31	35	37	32	33	42	39	54	446
" widows.....	56	43	52	60	66	68	74	68	77	64	78	69	79	100	954
" widowers...	15	11	20	11	13	21	14	14	31	15	25	29	17	28	264
" divorced....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	2
" unknown ..	4	2	3	4	6	6	7	2	1	.....	1	2	.....	2	40

* One card missing.
x Two cards missing.

TABLE No. 2.

AVERAGE AGE AT DEATH FOR ALL CANCERS.

Total years, white and colored	208,698
Total deaths, white and colored	3,676
Average age	56,773
Total number of years, white persons	188,471
Total deaths of whites	3,267
Average age at death	57,689
Total number of years, colored	20,227
Total deaths of colored	409
Average age at death	49,454

This classification is made according to the returns by the attending physicians.

TABLE No. 3.

TABLE SHOWING NUMBER OF DEATHS FROM CANCER, ACCORDING TO ORGAN INVOLVED, FROM 1891 TO 1904, INCLUSIVE. (FOURTEEN YEARS.)

ORGANS INVOLVED.	TOTAL DEATHS.			SEXES.		TOTAL YEARS.		
	No.	White	Black	Females	Males	No.	White	Black
Abdominal (abdomen, retro-peritoneal)	20	18	2	16	4	1,057	991	66
Axilla	7	7	.....	5	2	395	395	.....
Back	1	1	.....	.....	1	50	50	.....
Bladder	46	42	4	14	32	2,479	2,520	229
Breast	456	378	78	456	.....	25,235	21,115	4,120
Cerebrum	2	1	1	2	.....	47	44	3
Chest (chest, sternum, mediastinum, pleura)	6	6	.....	3	3	373	373	.....
Colon (colon, cæcum, hepatic flex, sigmoid)	39	38	1	14	25	2,235	2,182	53
Eyeball	1	1	.....	.....	1	8	8	.....
Extremities (scapula, shoulder, arm, humerus, hand, buttock and hip, thigh, leg, tibia, knee, foot)	23	22	1	10	13	1,213	1,143	70
Face (cheek, nose, eye, ear, lip, mouth, palate, mouth and face)	120	116	4	47	73	7,641	7,423	218
Gall bladder and duct	8	7	1	5	3	433	376	57
Genital organs—female, external (clitoris, genitalia, vulva, vagina)	19	18	1	19	.....	1,189	1,150	39
Genital organs—male (penis, scrotum, testicle)	7	6	1	.....	7	398	352	46
Glands (lymphatic)	7	7	.....	2	5	397	397	.....
Head (head, scalp, skull)	10	9	1	7	3	723	112	59
Intestine (duodenum, intestine, bowels)	84	76	8	53	31	4,676	4,338	338
Inguinal region	2	2	.....	.....	2	82	82	.....
Jaw (antrum of Highmore, upper, lower)	26	22	4	9	17	1,527	1,291	236
Kidney	27	27	.....	13	14	1,432	1,432	.....

Larynx	18	18	..	4	14	1,001	1,001	.....
Liver	396	368	28	247	149	23,593	22,046	1,547
Lungs	11	11	.....	5	6	509	509	.....
Neck	26	21	5	5	21	1,537	1,326	211
Oesophagus	38	26	2	7	31	2 240	2,149	91
Ovary	30	29	1	30	.....	1,332	1,292	40
Pancreas	28	25	3	10	18	1,562	1,417	145
Pelvic (pelvic, broad ligament)	12	11	1	3	9	585	531	54
Perineum	1	.....	1	.....	1	57	.....	57
Periteneum (periteneum, mesentery, omentum)	25	21	4	17	8	1,334	1,074	260
Pharynx (pharynx, throat, tonsil)	43	39	4	7	36	2,510	2,292	218
Prostate	6	5	1	.....	6	419	370	49
Rectum	118	108	10	63	55	6,744	6,265	479
Salivary glands (parotid, sub-lingual)	2	2	.....	1	1	110	110	.....
Skin	2	2	.....	1	1	71	71	.....
Spleen	6	6	.....	3	3	357	357	.....
Spine	5	5	.....	3	2	251	251	.....
Stomach	1,209	924	105	526	503	62,656	56,701	5,955
Tongue	45	43	2	6	39	2,593	2,446	145
Thyroid gland	6	6	.....	4	2	357	357	.....
Umbilicus	1	1	.....	1	.....	58	58	.....
Uterus	680	584	96	680	.....	34,792	30,246	4,546
Organ not named	233	196	37	160	73	12,190	11,296	894
Total	*3,672							

*Four items missing.

TABLE No. 4.

ALIMENTARY CANAL.

ORGAN INVOLVED.	TOTAL DEATHS.			SEXES.		TOTAL YEARS.		
	No.	White.	Black.	Females.	Males.	No.	White	Black.
Mouth	15	14	1	6	9	865	825	40
Tongue	45	43	2	6	39	2,593	2,446	147
Palate	1	1	.....	.....	1	63	63	.....
Pharynx	43	39	4	5	36	5,510	2,292	28
Oesophagus	38	36	2	7	31	2,240	2,149	91
Stomach	1,029	924	105	526	503	62,656	56,701	5,955
Intestine (small)	84	76	8	53	31	4,676	4,338	338
Colon	39	38	1	14	25	2,235	2,182	53
Rectum	118	108	10	63	55	6,744	6,265	479
Total	1,412	1,279	133					

TABLE No. 5.

Average Age at Death as per Organ Involved.

Breast—

Total number of years, white and black	25,235
Total deaths	456
Average age at death	55,340
Total number of years, white	21,115
Total deaths, white	378
Average age at death	55,865
Total number of years, black	4,120
Total deaths, black	78
Average age	52,820

Liver—

Total deaths, white and black	396
Total number of years	23,593
Average age	59,378
Total deaths, white	368
Total number of years	22,046
Average age	59,907
Total deaths, black	28
Total years, black	1,547
Average age	55,250

Rectum—

Total deaths, white and black	118
Total years, white and black	6,744
Average age	57,152
Total deaths, white	108
Total years, white	6,265
Average age, white	58,009
Total deaths, black	10
Total years, black	479
Average age, black	47,900

TABLE No. 5—Concluded.

Stomach—

Total deaths, white and black	1,029
Total number of years	62,656
Average age	60,890
Total deaths, white	924
Total years, white	56,701
Average age, white	61,363
Total deaths, black	105
Total years, black	5,955
Average age, black	56,714

Uterus—

Total deaths, white and black	680
Total number of years	34,792
Average age	51,017
Total deaths, white	584
Total years	30,246
Average age, white	51,791
Total deaths, black	96
Total years, black	4,546
Average age, black	47,354

TABLE No. 6.

THE FIVE PRINCIPAL ORGANS INVOLVED IN EACH OF THE FOURTEEN YEARS.

	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.
Stomach	51	57	72	53	69	81	56	71	82	74	80	78	88	107
Liver	18	18	15	17	22	28	30	20	37	29	44	37	32	49
Uterus	46	36	37	42	43	50	59	41	49	59	49	52	64	53
Breast	35	28	22	32	35	29	35	29	30	25	41	38	30	47
Rectum	10	3	7	3	7	9	5	10	10	6	11	10	15	12

TABLE No. 7.

THE NUMBER OF DEATHS OF MALES AND FEMALES ACCORDING TO ORGANS INVOLVED, EXCLUSIVE OF THE GENITALS.

	Males.	Females.
Abdomen	16	4
Axilla	5	2
Back	.....	1
Bladder	14	32
Cerebrum	2	.....
Chest (chest, mediastinum, pleura)	3	3
Colon (colon, cæcum)	14	25
Extremities (shoulder, humerus, hip, butteck, leg, tibia, knee, feet)	10	13
Face (face, cheek, nose, eye, lip, mouth)	47	73
Gall bladder and duct	5	3
Glands (lymphatic)	2	5
Head	7	3
Intestine	53	31
Jaw	9	17
Kidney	13	14
Larynx	4	14
Liver	247	149
Lungs	53	31
Neck	5	21
Oesophagus	7	31
Pancreas	10	18
Pelvic	3	9
Perineum	.....	1
Peritoneum	17	8
Pharynx	7	36
Rectum	63	55
Salivary glands	1	1
Skin	1	1
Spleen	3	3
Spine	3	2
Stomach	526	503
Tongue	6	39
Thyroid gland	4	2
Umbilicus	1	.....
Not named	196	37
Total	1,309	1,164

TABLE No. 8.

Deaths from Cancers, According to Occupation, for Fourteen Years—1891-1904.

Artisans (49 occupations, each having less than five deaths)	83	Merchants and manufacturers, including bankers	156
Attorneys and brokers	12	Musicians	5
Bakers	8	Nurses	19
Barbers	10	Painters	14
Blacksmiths	11	Peddlers	6
Butchers	17	Physicians	7
Builders and contractors	16	Plasterers	9
Carpenters	36	Police and watchmen	15
Cabinet-makers	9	Porters	9
Clergy	10	Printers and engravers	8
Clerks	61	Recluse	8
Cigarmakers	14	Saloon and restaurant-keepers	18
Coopers	6	Sailors	19
Dairymen	5	Seamstresses and milliners	55
Engineers	9	Servants	126
Farmers	24	Shoemakers	46
Gardeners	14	Steam railroad employes	13
Housewives	879	Tailors	67
Laborers	216	Teachers	15
Laundresses	39	Miscellaneous, each having less than five deaths	73
Machinists and boiler-makers	25	No occupation	1474
Moulders	10		

TUBERCULOSIS.

The following are the tables constructed from tuberculosis data:

TABLE NO. 1—AVERAGE AGE AT DEATH DUE TO TUBERCULOSIS.

Average age at death, both white and colored, for all cases	33.305 years.
Average age of white	35.628 "
Average age of colored	28.000 "
Average age, both white and colored, above 10 years of age	36.113 "
Average age of white, above 10 years of age	38.232 "
Average age of colored, above 10 years of age	31.278 "

TABLE NO. 2—ACCORDING TO MONTHS, SEX AND COLOR.

MONTHS.	Male	Female	White	Colored	Total
January	77	53	96	34	130
February	89	59	107	41	148
March	90	58	105	43	148
April	81	63	98	46	144
May	64	69	85	48	133
June	62	59	86	35	121
July	65	51	72	44	116
August	61	51	74	38	112
September	57	54	73	38	111
October	48	52	68	32	100
November	59	51	80	30	110
December	56	44	78	22	100
Total	809	664	1,022	451	1,473

TABLE NO. 3—SHOWING AGE AND SOCIAL CONDITION.

Under 1 year of age	44	Between 45 and 50 years	94
Between 1 and 2 years	32	" 50 " 55 "	78
" 2 " 5 "	26	" 55 " 60 "	55
" 5 " 10 "	25	" 60 " 65 "	33
" 10 " 15 "	27	" 65 " 70 "	41
" 15 " 20 "	140	" 70 " 75 "	18
" 20 " 25 "	217	" 75 " 80 "	8
" 30 " 35 "	145	" 80 " 85 "	2
" 40 " 45 "	117		
		Total	1473

SOCIAL CONDITION.

Married	585	Single	724
Widowers	67	Widows	71
Divorced	5	Unknown	21

TABLE NO 4—DEATHS FROM TUBERCULOSIS DURING 1904, ACCORDING TO OCCUPATION.

Actor	2	Engineer	4	Physicians	1
Arab	1	Errand boy	1	Pipefitter	1
Artists	2	Factory	1	Plasterers	2
Attorneys	2	Farmer	2	Plumbers	6
Bakers	2	Firemen	6	Policemen	4
Barbers	8	Flagman	1	Printers, engravers	12
Basketmaker	1	Florist	1	Recluse	9
Blacksmith	6	Foreman	5	Restaurant	2
Boilermaker	1	Gauger	1	Riggers	2
Bookbinder	2	Glassblowers	2	Sailors	11
Bootblack	2	Glasscutter	1	Saloonkeepers	11
Boxmaker	1	Harnessmaker	1	Scholars	19
Brassfinisher	3	Hatter	3	Scourer	1
Brewery helper	1	Hostler	4	Seamstresses	19
Bricklayers	6	Housewives	195	Servants	107
Bridge builder	1	Hucksters	5	Ship carpenter	1
Broker	1	Insurance agents	5	Shirt factory operators	2
Broom-maker	1	Ironworker	1	Shoemakers	5
Builder	1	Janitors	6	Shoefactory operator	1
Butchers	5	Laborers	189	Soldiers (retired)	3
Cabinetmakers	4	Laundresses	18	Stonecutters	8
Candymaker	1	Letter carrier	1	Stone polisher	1
Canmaker	3	Liquor dealers	1	Student	1
Carpenters	9	Machinists	14	Tailors	24
Carriage trimmer	1	Marble worker	1	Teachers	4
Carriage builder	1	Merchants and manufacturers	24	Telegraph operators	1
Cigarmakers	10	Mill hands	4	Tile setter	1
Clergymen	2	Miller	1	Tinners	6
Clerks	86	Milliner	1	Tobacco factory operators	4
Collectors	6	Moulders	5	Undertakers	1
Conductor	1	Moulders (wood)	1	Upholsterers	1
Confectioner	1	Musicians	6	Varnishers	6
Contractor	2	Nurses	2	Weavers	2
Coopers	4	Packer (cake)	1	Wheelwright	1
Copper smelter	1	Painters	7	Not specified	460
Dairymen	1	Paperhangers	2		
Drivers	25	Peddler	1		
Druggists	1	Photographers	1		
Electrical worker	1				

PNEUMONIA.

I present to you the tabulation of deaths due to this disease separate from that of broncho-pneumonia, although I present no map for the latter. The following are the two tables:

DEATHS FROM PNEUMONIA DURING 1904, ACCORDING TO SEX, COLOR AND AGE.

MONTH.		Male	Female	White	Colored
January	126	67	59	88	38
February	165	90	75	117	48
March	136	69	67	90	46
April	90	42	48	52	38
May	67	32	35	43	24
June	26	20	6	17	9
July	18	10	8	9	9
August	23	14	9	16	7
September	17	10	7	12	5
October	45	19	26	29	16
November	27	27	45	45	27
December	107	60	47	69	38
Total	892	460	432	587	305

Under 1 year of age	127
Between 1 and 2 years	65
" 2 " 5 "	53
" 5 " 10 "	29
" 10 " 15 "	10
" 15 " 20 "	32
" 20 " 25 "	38
" 25 " 30 "	33
" 30 " 35 "	54
" 35 " 40 "	50
" 40 " 45 "	58
" 45 " 50 "	46
" 50 " 55 "	41
" 55 " 60 "	51
" 60 " 65 "	58
" 65 " 70 "	47
" 70 " 75 "	47
" 75 " 80 "	28
" 80 " 85 "	15
" 85 " 90 "	6
" 90 " 95 "	3
" 95 " 100 "	
" 100 " 105 "	1
Total	892

SUMMARY OF DEATHS FROM BRONCHO-PNEUMONIA ACCORDING TO SEX, COLOR AND AGE DURING THE YEAR 1904.

MONTH.	Male.	Female.	White.	Black.
January	17	19	23	13
February	36	30	44	22
March	24	37	36	25
April	18	14	17	15
May	8	14	13	9
June	4	4	5	3
July	2	4	4	2
August	3	3	3	3
September	3	7	7	3
October	4	5	5	4
November	5	7	5	7
December	12	9	11	10
Total	136	153	173	116

Under 1 year of age	136
Between 1 and 2 years	66
" 2 " 5 "	30
" 5 " 10 "	4
" 10 " 15 "	2
" 15 " 20 "	3
" 20 " 25 "	1
" 25 " 30 "	1
" 30 " 35 "	2
" 35 " 40 "	
" 40 " 45 "	4
" 45 " 50 "	
" 50 " 55 "	2
" 55 " 60 "	3
" 60 " 65 "	6
" 65 " 70 "	5
" 70 " 75 "	12
" 75 " 80 "	6
" 80 " 85 "	5
" 85 " 90 "	3
Total	289

TYPHOID FEVER.

Nine hundred and sixteen cases were reported during the year, giving an increase of 148 cases over 1903.

The following table shows the number of cases and deaths reported each year beginning with 1898:

TABLE SHOWING THE NUMBER OF CASES OF TYPHOID FEVER REPORTED EACH MONTH FROM 1898 TO 1904, INCLUSIVE; ALSO TOTAL NUMBER OF DEATHS EACH YEAR.

YEAR.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total Cases	Total Deaths
1898	14	16	11	13	9	15	43	92	147	104	58	23	545	192
1899	19	15	7	15	8	16	22	74	103	108	41	34	462	152
1900	29	16	16	20	24	11	53	189	159	152	114	88	871	189
1901	35	34	25	29	25	26	62	159	180	125	57	35	792	141
1902	29	17	20	30	23	40	61	206	317	216	69	48	1,086	220
1903	28	36	29	25	27	60	131	146	128	85	40	33	768	189
1904	49	54	39	35	32	36	84	207	128	124	48	80	916	199

Very respectfully,

C. HAMPSON JONES, M.D.,

Assistant Commissioner of Health.

REPORT.

BALTIMORE, January 1, 1905.

JAMES BOSLEY, M. D.,

Commissioner of Health.

SIR :—I have the honor to herewith submit the report of the Quarantine Hospital for the year ending December 31, 1904.

During the year eight hundred and eleven vessels have been boarded and inspected (See Table 1), and from these vessels we have collected and paid into the City Treasury the sum of twelve thousand eight hundred and eighty ($12,880.91) dollars and ninety-one cents (See Table 2).

Table 3 shows the number and class of vessels with sickness on board or from infected ports detained at Quarantine for disinfection and fumigation. There were nine in all.

Sixty-four cases of small-pox were treated in the hospital during the year. (See Table 4). Of these, fifty-seven came from the city, two from Baltimore county, five were taken from steamships and one remained over from 1903. There were four deaths.

One hundred persons were received and placed in the Detention House for a period of fourteen days for observation, they having come in contact with small-pox; nine cases developed and were removed to the hospital.

The cost of maintaining the Quarantine Station for the year was, for salaries, $11,838.05, and for general expenses, $6,200.

The Detention House has been furnished and has a capacity of one hundred beds. It was occupied continuously from February until July, thereby showing its usefulness in preventing an epidemic of small-pox.

I desire especially to call your attention to the condition of the Quarantine boat "Hygeia." Having been in constant use for the past twenty years, she is now in such a condition that it is absolutely necessary that a new and more modern boat be procured to take her place. The cost of repairs have increased to such an extent that it is impossible for me to estimate them from year to year with any degree of accuracy.

In conclusion, I desire to thank Dr. T. W. Clark for his intelligent assistance, and to say that the employes of the place performed their duties in a manner deserving the highest praise.

Very respectfully,

S. O. Heiskell, M.D.,
Quarantine Physician.

TABLE No. 1.

SHOWING THE NUMBER OF VESSELS BOARDED AND INSPECTED AT THE QUARANTINE FOR THE YEAR ENDING DECEMBER 31, 1904.

MONTHS.	CLASS OF VESSELS.					
	Steamships.	Ships.	Barks.	Brigs.	Schooners.	Total.
January	37	1	5	.....	1	44
February	24	.....	1	.....	.....	25
March	36	.....	3	1	3	43
April	40	1	2	.....	3	46
May	61	.....	5	3	30	99
June	60	.....	.....	1	43	104
July	64	1	7	1	18	91
August	71	.....	2	1	8	82
September	73	.....	6	1	11	91
October	68	.....	2	2	10	82
November	52	.....	7	.....	1	60
December	41	1	1	.....	1	44
Total	627	4	41	10	129	811

TABLE No. 2.

SHOWING THE AMOUNT OF MONEY RECEIVED FOR QUARANTINE FEES AND PAID TO THE CITY REGISTER FOR THE YEAR ENDING DECEMBER 31, 1904.

MONTHS.	CLASS OF VESSELS.						
	Steamships.	Ships.	Barks.	Brigs.	Schooners.	Care of County Patients, and Fumigation of Vessels.	Total.
January	$ 905 29	$17 00	$ 65 77	.....	$ 7 08	$ 9 50	$ 1,004 64
February	598 45	.....	6 65	.....	.....	.....	605 10
March	876 89	.....	18 12	$ 3 36	19 01	.....	917 65
April	900 93	33 47	12 13	.....	14 76	.....	961 29
May	1,097 12	.....	64 19	10 17	170 93	.....	1,342 95
June	1,067 65	.....	.....	5 55	162 29	.....	1,235 49
July	922 79	17 72	39 52	5 55	113 13	.....	1,098 71
August	1,144 15	.....	28 52	5 55	73 17	.....	1,251 39
September	1,229 16	.....	33 62	5 55	67 40	.....	1,335 73
October	1,187 31	.....	9 22	22 69	62 36	.....	1,281 58
November	878 70	.....	42 66	.....	2 00	.....	923 36
December	869 88	15 95	8 70	.....	3 49	25 00	923 02
Total	$11,678 32	$84 14	$329 91	$58 42	$695 62	$ 34 50	$12,880 91

TABLE No. 3.

SHOWING THE NUMBER AND CLASS OF VESSELS DETAINED AT QUARANTINE FOR FUMIGATION AND DISINFECTION FOR THE YEAR ENDING DECEMBER 31, 1904.

MONTHS.	CLASS OF VESSELS.					
	Steamships.	Ships.	Barks.	Brigs.	Schooners.	Totals.
January	1	.....	.....	.....	.....	1
February	.....	.....	.....	.....	.....	.....
March	1	.....	.....	.....	.....	1
April	.....	.....	.....	.....	.....	.....
May	.....	.....	.....	.....	.....	.....
June	1	.....	.....	.....	.....	1
July	.....	.....	.....	.....	.....	.....
August	1	.....	.....	.....	.....	1
September	4	.....	.....	.....	.....	4
October	.....	.....	.....	.....	.....	.....
November	.....	.....	.....	.....	.....	.....
December	1	.....	.....	.....	.....	1
Total	9	.....	.....	.....	.....	9

TABLE No. 4.

SHOWING THE NUMBER OF PATIENTS TREATED AND SUSPECTS DETAINED AT THE QUARANTINE HOSPITAL DURING THE YEAR ENDING DECEMBER 31, 1904.

DISEASE.	Remaining Over from 1903.	Received in 1904.	Discharged in 1904.	Died.	Remaining in Hospital.	Total.
Small-pox	1	63	59	4	.....	64
Syphilis	.....	1	1	.....	.....	1
Puerpura	.....	1	1	.....	.....	1
Quarantined	.....	100	100	.....	.....	100
Total	1	165	161	4	.....	166

Tables of Vital Statistics

—— OF ——

Baltimore City

For Year Ending December 31, 1904.

TABLES.

VITAL STATISTICS OF THE CITY OF BALTIMORE FOR THE YEAR ENDING DECEMBER 31, 1904.

Estimated population, white			457,000
" " colored			84,000
Total			541,000
Marriages reported			5,438
Rate per 1,000 population			10.05
Births reported, white males	3,538		
" " " females	3,325		
		6,863	
" " colored males	906		
" " " " females	830		
		1,736	
Total births reported			8,599
Birth rate per 1,000 population, whole			15.90
" " " " white			15.02
" " " " colored			20.67
Still births reported			710
Total mortality, white males	4,271		
" " " females	3,825		
		8,096	
" " colored males	1,383		
" " " females	1,339		
		2,722	
Total deaths reported			10,818
Annual death rate per 1,000 population, whole			20.00
" " " " " less non-residents			19.26
" " " " " white			17.72
" " " " " less non-residents			17.02
" " " " " colored			32 40
" " " " " less non-residents			31.44

Total number of deaths from typhoid fever	199
" " " " measles	6
" " " " scarlet fever	143
" " " " whooping-cough	24
" " " " diphtheria and croup	115
" " " " influenza (la grippe)	122
" " " " dysentery	54
" " " " tuberculosis of the lungs	1,349
" " " " other tuberculous diseases	165
" " " " cancers	450
" " " " anæmia	37
" " " " diseases of the heart	815
" " " " bronchitis	287
" " " " pneumonia	1,121
" " " " diarrhœa and enteritis, under 5 years	671
" " " " diarrhœa and enteritis, over 5 years	72
" " " " Bright's disease	749
" " " " puerperal hemorrhage	11
" " " " puerperal septicæmia	59
" " " " puerperal convulsions	17
" " " " sunstroke and heat	6
" " " " accidents	361
" " " " suicides	81
" " " " under five years of age	3,155

Deaths in Public Institutions.

Baltimore City Jail	9
Penitentiary	25
Hospitals and asylums	1,757
Total	1,791
Number of Coroners' inquests	1,231
" autopsies	46
" non-residents dying within the city limits, white	317
" non-residents dying within the city limits, colored	81

TABLE I—Showing the Number of Infectious and Contagious Diseases Reported During the Year 1904.

Diseases.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Small-pox	1	4	9	14	20	10	.....	.....	.....	.....	.....	.....	58
Diphtheria	156	88	67	69	64	57	68	72	128	152	153	167	1241
Pseudo-Membraneous Croup	3	4	2	8	1	2	1	1	1	2	1	5	31
Scarlet Fever	136	99	125	151	192	101	63	43	80	72	52	108	1222
Typhoid Fever	49	54	39	35	32	36	84	207	128	124	48	80	916
Measles	17	15	30	40	108	48	19	12	8	3	9	35	344
Mumps	12	17	15	5	37	24	4	.....	.....	2	2	4	122
Whooping Cough	17	12	10	11	10	3	1	5	6	.....	1	2	78
Varicella	66	46	30	17	19	21	14	2	5	17	40	57	334
Tuberculosis Pulmonalis	43	43	59	36	42	41	30	41	47	33	24	37	476
Total	500	382	38	386	525	343	284	383	403	405	330	495	4822

TABLE II—SHOWING THE NUMBER OF DEATHS ACCORDING TO AGES DURING THE YEAR 1904.

AGES.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Under 1 year	165	171	187	146	136	183	410	285	199	137	129	141	2289
Between 1 and 2 years	23	45	47	34	33	35	50	51	41	27	28	34	448
" 2 " 5 "	44	37	50	53	34	24	32	25	28	23	38	30	418
Total under 5 years	232	253	284	233	203	242	492	361	286	187	195	205	3155
Between 5 and 10 years	30	20	18	29	31	21	19	22	21	19	9	18	257
" 10 " 15 "	16	15	17	10	12	9	22	9	13	10	9	7	149
" 15 " 20 "	31	33	30	23	22	25	30	25	37	24	28	31	339
" 20 " 30 "	84	83	100	85	92	70	78	84	68	75	81	87	987
" 30 " 40 "	85	106	87	85	92	78	86	67	67	68	80	85	986
" 40 " 50 "	109	107	117	88	89	78	77	86	75	86	71	107	1090
" 50 " 60 "	107	102	104	105	96	74	77	77	77	103	95	102	1119
" 60 " 70 "	115	127	144	104	99	79	77	85	75	95	105	98	1203
" 70 " 80 "	91	116	119	85	96	50	84	71	70	76	96	80	1034
" 80 " 90 "	51	55	48	44	32	27	27	25	36	33	22	40	440
" 90 " 100 "	8	7	5	6	5	1	2	4	3	4	2	5	52
" 100 " 110 "	.....	.....	1	1	.....	.....	.....	2	.....	.....	.....	.....	4
" 110 " 115 "	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Unknown age	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	2
Total	959	1024	1075	898	869	754	1071	919	810	780	793	866	10818

TABLE III.

SHOWING THE NUMBER OF DEATHS ACCORDING TO AGES, SEX AND COLOR DURING THE YEAR 1904.—WHITES.

AGES.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		TOTAL.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Under 1 year	68	49	83	47	62	54	65	36	55	41	68	60	171	129	104	96	83	57	52	33	55	44	60	38	1610
Between 1 and 2 years	6	9	18	7	18	7	9	13	11	7	15	11	28	11	18	24	20	13	6	12	11	9	12	13	308
" 2 " 5 "	14	15	16	13	14	19	21	15	13	15	6	10	15	6	12	8	11	6	10	10	14	17	13	10	303
Total under 5 years	88	73	117	67	94	80	95	64	79	63	89	81	214	146	134	128	114	76	68	55	80	70	85	61	2221
Between 5 and 10 years	10	11	8	7	3	10	10	10	8	10	15	1	9	5	6	12	9	5	9	8	2	7	5	8	188
" 10 " 15 "	2	8	6	5	8	5	3	1	5	4	4	4	9	7	3	4	6	.....	2	3	2	5	1	4	101
" 15 " 20 "	10	8	9	12	13	10	4	10	7	6	7	11	9	11	10	6	11	12	8	9	8	9	13	8	221
" 20 " 30 "	27	23	29	24	28	36	28	18	32	30	20	28	29	24	23	34	18	29	23	29	32	24	28	36	652
" 30 " 40 "	34	28	41	37	35	27	42	22	26	34	32	27	44	18	30	20	26	20	23	20	34	24	25	29	698
" 40 " 50 "	44	39	50	32	56	59	26	33	37	25	23	21	35	18	29	30	33	24	35	30	31	22	45	30	777
" 50 " 60 "	41	38	46	33	46	33	53	28	42	30	21	33	41	22	42	22	33	24	47	34	42	30	39	37	857
" 60 " 70 "	54	43	61	52	54	66	42	45	40	40	33	34	32	34	36	34	32	27	50	31	35	48	45	42	1010
" 70 " 80 "	40	41	44	59	40	65	39	38	40	48	21	22	24	53	36	31	34	31	39	29	34	50	36	40	934
" 80 " 90 "	16	32	24	24	12	27	15	24	14	14	11	15	11	15	10	8	12	21	13	18	8	12	8	28	392
" 90 " 100 "	1	5	4	3	1	3	2	1	2	3	.....	1	1	1	1	1	1	1	1	3	.....	2	3	1	42
" 100 " 110 "	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
" 110 " 115 "	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unknown	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Total	367	349	439	355	390	391	359	295	332	307	276	278	458	354	362	330	329	270	318	269	308	303	333	324	8096

TABLE IV.

SHOWING THE NUMBER OF DEATHS ACCORDING TO AGES, SEX AND COLOR DURING THE YEAR 1904.—COLORED.

AGES.	January.		February.		March.		April.		May		June		July		August		September		October.		November.		December.		TOTAL.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F	M.	F.	M.	F.	M.	F.	M.	F.	
Under 1 year	29	19	24	17	31	40	19	26	24	16	31	24	54	56	47	38	30	29	24	28	15	15	16	27	679
Between 1 and 2 years	2	6	14	6	11	11	4	8	7	8	6	3	5	6	5	4	3	5	2	7	3	5	4	5	140
" 2 " 5 "	8	7	5	3	6	11	5	12	4	2	5	3	4	7	2	3	6	5	1	2	4	3	1	6	115
Total under 5 "	39	32	43	26	48	62	28	46	35	26	42	30	63	69	54	45	39	39	27	37	22	23	21	38	934
Between 5 and 10 "	3	6	1	4	3	2	1	8	7	6	4	1	2	3	2	2	3	4	1	1	.....	.....	2	3	69
" 10 " 15 "	4	2	4	.....	.....	4	3	3	1	2	.....	1	1	5	.....	2	4	3	4	1	1	1	.....	2	48
" 15 " 20 "	8	5	3	9	3	4	6	3	4	5	2	5	6	4	7	2	6	8	5	2	4	7	5	5	118
" 20 " 30 "	16	18	16	14	20	16	18	21	13	17	14	8	12	13	14	13	13	8	12	11	12	13	14	9	335
" 30 " 40 "	16	7	15	13	12	13	9	12	20	12	10	9	12	12	8	9	15	6	11	14	13	9	18	13	288
" 40 " 50 "	14	12	15	10	20	12	15	14	15	12	21	13	15	9	13	14	8	10	12	9	9	9	16	16	313
" 50 " 60 "	15	13	15	8	13	12	17	7	8	16	9	11	8	6	2	11	11	9	10	12	12	11	14	12	262
" 60 " 70 "	11	7	9	5	14	10	9	8	13	6	6	6	8	3	8	7	9	7	3	11	11	11	7	4	193
" 70 " 80 "	5	5	4	9	5	9	1	7	4	4	5	2	3	4	.....	4	1	4	3	5	6	6	2	2	100
" 80 " 90 "	1	2	2	5	5	4	1	4	1	3	.....	1	1	.....	1	6	2	1	.....	2	1	1	3	1	48
" 90 " 100 "	.....	2	.....	.....	1	.....	2	1	.....	.....	.....	.....	.....	.....	1	1	.....	1	.....	.....	.....	.....	1	.....	10
" 100 " 110 "	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
" 110 " 115 "	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Unknown	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Total	132	111	127	103	144	150	110	134	121	109	113	87	131	128	111	116	111	100	88	105	91	91	104	105	2722

TABLE V.

Showing the Nativity of the Decedents for the Year 1904.

Nativity	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
United States—White males	276	331	290	259	246	219	372	289	263	233	233	237	3248
" " " females	263	257	280	299	227	215	281	276	193	201	223	233	2858
Foreign—White males	89	104	97	93	82	52	82	68	60	76	71	89	963
" " females	79	95	111	84	78	61	69	52	70	64	74	84	921
Colored males	124	122	136	108	112	110	124	109	103	82	85	99	1314
" females	111	101	148	132	106	87	125	114	96	104	88	102	1314
Unknown—White males	2	4	3	7	4	5	4	5	6	9	4	7	60
" " females	7	3	.....	2	2	2	4	2	7	4	6	7	46
" Colored males	8	5	8	2	9	3	7	2	8	6	6	5	69
" " females	.....	2	2	2	3	.....	3	2	4	1	3	3	25
Total	959	1024	1075	898	869	754	1071	919	810	780	793	866	10818

Marriages for the Year 1904.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Marriages	372	314	306	541	348	679	330	410	499	569	570	500	5438

TABLE VI.

SHOWING THE NUMBER OF BIRTHS REPORTED DURING THE YEAR 1904.

SEX AND COLOR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
White males	276	293	287	351	242	300	273	311	331	304	298	272	3538
" females	244	263	249	335	233	276	276	285	288	292	288	296	3325
Colored males	78	96	83	81	60	89	75	59	99	68	57	61	906
" females	76	98	75	60	59	75	84	48	70	63	75	47	830
Total	674	750	694	827	594	740	708	703	788	727	718	676	8599
ILLEGITIMATES.													
White males	13	9	13	9	11	17	10	9	23	12	9	8	143
" females	17	8	15	8	15	7	15	7	14	4	11	3	124
Colored males	18	26	17	19	18	32	23	13	27	15	10	14	232
" females	23	31	20	15	16	20	26	5	21	15	13	11	216
Total	71	74	65	51	60	76	74	34	85	46	43	36	715
STILL BIRTHS.													
White males	26	19	20	14	23	22	18	24	21	19	21	12	249
" females	23	9	16	13	16	18	15	21	17	19	13	14	194
Colored males	16	20	16	10	6	20	8	10	12	10	17	12	157
" females	12	10	9	5	8	10	8	9	10	6	10	13	110
Total	77	58	61	42	53	70	49	64	60	54	61	61	710

TABLE VII.

SHOWING THE NUMBER OF DEATHS REPORTED DURING THE YEAR IN MONTHLY PERIODS—SEX, COLOR AND NATIVITY.

MONTHS.	NATIVE WHITE.			FOREIGN WHITE.			WHITE.			COLORED.			TOTALS.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
January	276	263	539	89	79	168	U'n 2 365 U'n 4	U'n 7 342 U'n 3	716	U'n 8 124 U'n 5	111 U'n 2	243	499	460	959
February	331	257	588	104	95	199	435 U'n 3	352	794	122 U'n 8	101 U'n 2	230	566	458	1,024
March	290	280	570	97	111	208	387 U'n 7	391 U'n 2	781	136 U'n 2	148 U'n 2	294	534	541	1,075
April	259	209	468	93	84	177	352 U'n 4	293 U'n 2	654	108 U'n 9	132 U'n 3	244	469	429	898
May	246	227	473	82	78	160	328 U'n 5	305 U'n 2	639	112 U'n 3	106	230	453	416	869
June	219	215	434	52	61	113	271 U'n 4	276 U'n 4	554	110 U'n 7	87 U'n 3	200	389	365	754
July	372	281	653	82	69	151	454 U'n 5	350 U'n 2	812	124 U'n 2	125 U'n 2	259	589	482	1,071
August	289	276	565	68	52	120	357 U'n 6	328 U'n 7	692	109 U'n 8	114 U'n 4	227	473	446	919
September	263	193	456	60	70	130	323 U'n 9	263 U'n 4	599	103 U'n 6	96 U'n 1	211	440	370	810
October	233	201	434	76	64	140	309 U'n 4	265 U'n 6	587	82 U'n 6	104 U'n 3	193	406	374	780
November	233	223	456	71	74	145	304 U'n 7	297 U'n 7	611	85 U'n 5	88 U'n 3	182	399	394	793
December	237	233	470	89	84	173	326	317	657	99	102	209	437	429	866
Total	3,248	2,858	6,106	963	921	1,884	4,271	3,825	8,906	1,383	1,339	2,722	5,654	5,164	10,818

TABLE VIII.

SHOWING THE NUMBER OF DEATHS ACCORDING TO WARDS DURING THE YEAR 1904.

WARDS.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
First	31	33	33	28	34	27	54	30	29	26	27	37	389
Second	43	48	36	35	24	32	55	51	32	26	31	28	441
Third	39	33	48	45	46	39	50	39	45	18	21	28	451
Fourth	60	71	69	60	63	48	78	54	37	50	49	52	691
Fifth	28	53	34	40	35	27	38	42	30	33	30	30	420
Sixth	29	57	40	31	38	32	34	35	36	39	33	47	451
Seventh	46	40	54	33	33	40	53	55	33	47	46	37	517
Eighth	41	52	49	26	26	33	46	31	37	37	30	29	437
Ninth	27	33	31	27	31	24	34	22	37	28	27	35	356
Tenth	47	42	48	42	41	38	48	45	26	37	45	30	489
Eleventh	45	37	43	31	36	26	43	35	27	21	35	35	414
Twelfth	45	37	33	31	27	31	38	44	40	31	31	24	412
Thirteenth	29	32	26	22	22	13	35	34	30	21	18	19	301
Fourteenth	58	55	62	50	49	38	50	37	38	27	41	50	555
Fifteenth	32	37	32	31	32	22	45	33	33	31	33	45	406
Sixteenth	35	39	44	33	39	18	33	33	23	39	34	40	410
Seventeenth	54	46	57	39	33	42	53	35	33	31	26	40	489
Eighteenth	35	27	35	44	41	18	48	38	38	30	35	27	416
Nineteenth	38	26	44	36	42	27	32	39	30	37	31	40	422
Twentieth	26	43	42	27	36	15	26	29	28	30	21	38	361
Twenty-first	35	23	48	45	29	29	41	32	27	27	29	33	398
Twenty-second	48	43	46	38	30	33	31	31	24	31	23	33	411
Twenty third	17	32	36	28	20	34	31	34	28	25	28	21	334
Twenty-fourth	45	48	44	28	21	32	31	30	25	26	31	31	392
Bay View Asylum	26	37	41	48	41	36	44	31	44	32	38	37	455
Total	959	1024	1075	898	869	754	1071	919	810	780	793	866	10818

TABLE IX.

SHOWING THE NUMBER OF DEATHS IN HOSPITALS, PUBLIC INSTITUTIONS, INQUESTS, ETC., DURING THE YEAR 1904.

HOSPITALS, INSTITUTIONS, ETC.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total.
Hospitals--Resident, white	49	61	63	48	64	54	66	62	45	56	52	70	690
" " colored	28	23	31	15	26	33	21	20	19	18	17	14	265
" Non-residents, white	28	24	28	19	28	18	31	26	19	28	28	23	300
" " colored	6	4	4	8	6	4	16	7	6	4	2	6	73
OTHER INSTITUTIONS, ASYLUMS, ETC.													
Resident, white	22	17	34	24	23	24	53	27	27	9	21	17	298
" colored	9	10	13	8	10	7	12	10	12	6	5	4	106
Non-residents, white	3	.....	1	6	.....	1	1	2	1	1	1	.....	17
" colored	.....	3	2	.....	2	.....	.....	.....	1	.....	.....	.....	8
Jail	.....	1	1	1	.....	1	1	.....	1	1	1	1	9
Penitentiary	2	3	2	4	1	2	.....	1	3	3	1	3	25
Total	147	146	179	133	160	144	201	155	134	126	128	138	1791
Coroners' Inquests	104	101	121	93	93	81	124	93	107	100	100	114	1231
Autopsies	6	7	9	1	.....	.....	6	5	2	6	2	2	46

TABLE X.

SHOWING THE NUMBER OF DEATHS ACCORDING TO OCCUPATIONS DURING THE YEAR 1904.

MONTHS.	Attorneys.	Bakers.	Blacksmiths.	Bookkeepers and Clerks.	Bricklayers.	Butchers.	Carpenters.	Cigarmakers.	Drivers.	Druggists.	Electrical Workers.	Engineers.	Firemen.	Housewives.	Jewelers and Watchmakers	Laborers.	Laundresses.	Liquor Dealers.	Machinists.	Moulders.	Nurses.	Painters.	Paperhangers.	Planing Mill Workers.	Physicians.	Policemen.	Printers and Engravers.	Saloonkeepers.	Seamstresses.	Steam Railway Employes.	Street Railway Employes.	Shoemakers.	Stonecutters.	Servants.	Tailors.	Tinners.	All Others.	Not Specified.	TOTAL.
January	3	5	6	27	4	4	11	5	13	1	2	6	2	159	.....	96	11	1	.....	3	1	3	2	.....	1	3	.....	5	9	4	2	5	1	28	13	5	84	434	959
February	1	3	12	25	5	2	13	4	16	1	1	2	1	189	.....	94	4	.....	7	3	6	6	1	.....	1	2	4	8	9	5	2	9	2	30	18	2	89	447	1024
March	1	1	5	25	4	6	16	4	9	1	.....	2	4	209	2	101	10	1	5	1	2	5	.....	.....	2	3	4	8	7	5	1	5	6	34	11	3	83	489	1075
April	1	7	5	27	2	4	11	5	13	2	1	3	3	158	.....	91	8	.....	10	3	2	4	.....	1	3	2	1	4	6	6	1	4	2	35	7	.....	62	404	898
May	1	2	6	20	4	1	11	5	11	.....	2	5	2	165	.....	83	6	.....	2	6	.....	5	.....	.....	2	4	7	4	9	.....	1	1	4	29	10	2	71	388	869
June	3	.....	1	9	6	1	6	4	10	.....	1	2	2	138	.....	59	7	... ..	3	1	1	6	2	1	1	4	3	6	10	2	.....	2	.....	25	8	2	64	364	754
July	1	2	6	17	.....	1	14	5	14	2	3	4	4	126	.....	67	6	.....	7	2	3	9	.....	.....	2	3	5	5	6	2	2	7	4	29	5	2	74	632	1071
August	2	2	3	20	8	1	8	2	8	.....	1	3	1	144	1	56	4	1	6	3	3	4	.....	2	1	1	3	6	5	2	1	5	2	32	7	2	74	495	919
September	.....	1	3	15	3	2	4	3	17	1	.....	1	3	123	.....	69	10	1	3	2	.....	4	1	1	2	5	.....	.....	7	.....	.....	4	4	23	8	2	71	417	810
October	.....	1	5	17	1	2	12	4	13	1	1	5	1	134	.....	52	5	.....	5	3	2	10	.....	.....	6	5	1	4	9	6	1	6	3	25	5	2	73	360	780
November	.....	3	2	12	3	3	10	3	6	2	2	4	2	118	.....	67	8	.....	3	1	.....	9	.....	.....	6	1	.....	2	4	3	2	3	1	34	6	5	105	363	793
December	.....	.....	9	24	5	3	10	1	12	1	.....	3	3	152	.....	73	12	.....	2	1	1	6	.....	1	2	1	3	8	6	6	.....	4	3	37	8	6	82	381	866
Total	13	27	63	238	45	30	126	45	142	12	14	40	28	1815	3	908	91	4	53	29	21	71	6	6	29	34	31	60	87	41	13	55	32	361	106	33	932	5174	10818

TABLE XI.

SHOWING DEATHS ACCORDING TO SOCIAL CONDITION DURING THE YEAR 1904.

SOCIAL CONDITION.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
WHITES.																									
Single	174	145	207	139	173	150	164	112	156	125	155	126	289	197	195	176	187	123	125	104	136	126	158	124	3766
Married	139	98	172	110	153	107	133	98	131	99	87	88	121	83	124	90	95	70	136	87	135	84	119	104	2663
Widows	.....	103	.....	103	.....	133	.....	85	.....	81	.....	64	.....	71	.....	62	.....	75	.....	75	.....	91	.....	96	1039
Widowers	47	.....	59	.....	59	.....	55	.....	36	.....	24	.....	38	.....	36	.....	43	.....	50	.....	28	.....	50	.....	525
Divorced	.....	3	.....	2	.....	1	3	.....	3	1	2	.....	7	2	5	.....	1	1	1	3	2	.....	2	.....	39
Not given	7	.....	1	1	5	.....	4	.....	6	1	8	.....	3	1	2	2	3	1	6	.....	7	2	4	.....	64
Total	367	349	439	355	390	391	359	295	332	307	276	278	458	354	362	330	329	270	318	269	308	303	333	324	8096
COLORED.																									
Single	76	53	66	50	85	87	66	78	71	57	69	42	90	97	78	65	65	66	54	55	45	50	49	55	1569
Married	38	28	41	35	33	32	28	35	34	29	35	25	24	16	20	26	35	16	25	22	27	19	41	26	680
Widows	.....	30	.....	15	.....	29	.....	28	.....	22	.....	19	.....	15	.....	23	.....	15	.....	26	.....	20	.....	21	263
Widowers	14	.....	14	.....	17	.....	13	.....	9	.....	8	.....	11	.....	10	.....	8	.....	7	.....	17	.....	12	.....	140
Divorced	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	1	.....	.....	1	6
Not given	3	.....	6	3	8	2	3	3	7	1	1	1	5	.....	3	2	3	3	2	1	1	2	2	2	64
Total	132	111	127	103	144	150	110	134	121	109	113	87	131	128	111	116	111	100	88	105	91	91	104	105	2722

TABLE XII.

SHOWING THE NUMBER OF DEATHS BY MONTHS, ACCORDING TO CAUSES DURING THE YEAR 1904.

MONTHS.	Typhoid Fever.	Small-pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and pseudo-membranous croup.	Croup.	Tuberculosis of the lungs.	Other tuberculous diseases.	Cancer.	Diseases of the nervous system.	Heart diseases.	Bronchitis.	Pneumonia.	Diseases of the digestive system.	Diarrhœal diseases under five years.	Diarrhœal diseases over five years.	Bright's disease.	Puerperal fever.	Congenital debility, premature birth, etc.	Suicides.	Accidents.	Homicides.	All other diseases.	Deaths under five years of age.	TOTAL.
January	17	.....	.....	3	4	15	.....	120	10	43	101	69	43	163	38	7	5	48	6	48	2	37	1	179	232	959
February	4	.....	1	7	2	14	.....	142	13	31	93	87	41	203	44	10	8	65	9	45	5	24	2	174	253	1024
March	9	.....	.....	10	4	8	.....	134	12	36	77	83	48	190	43	5	6	70	8	48	5	31	3	245	284	1075
April	12	.....	.....	20	5	8	.....	129	21	28	77	82	31	115	41	7	5	68	9	33	7	30	.....	170	233	898
May	9	3	.....	28	3	4	.....	124	19	46	92	73	19	90	47	10	4	52	8	46	8	32	2	150	203	869
June	14	1	1	16	2	8	.....	105	19	28	82	42	8	36	53	56	4	48	3	44	11	29	3	141	242	754
July	15	.....	1	9	.....	8	.....	110	9	49	84	53	7	20	54	274	10	71	2	61	6	41	2	185	492	1071
August	29	.....	1	9	3	6	.....	93	16	33	69	56	12	27	59	178	12	56	5	50	10	31	5	159	361	919
September	23	.....	1	15	1	9	.....	111	11	32	65	69	14	23	36	75	7	63	1	52	5	39	1	157	268	810
October	25	.....	.....	6	.....	15	1	101	12	40	73	67	17	46	49	28	7	88	1	42	9	28	4	121	187	780
November	15	.....	.....	8	.....	13	.....	97	6	36	83	67	18	93	35	12	.....	60	.....	35	7	23	.....	185	195	793
December	27	.....	1	12	.....	6	.....	83	17	48	102	67	29	115	36	9	4	60	7	41	6	22	1	173	205	866
Total	199	4	6	143	24	114	1	1349	165	450	998	815	287	1121	535	671	72	749	59	545	81	367	24	2039	3155	10818

TABLE XIII.

SHOWING THE NUMBER OF DEATHS FROM ALL CAUSES DURING THE YEAR 1904.

DISEASES.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
I.—GENERAL DISEASES.													
1. Typhoid fever	17	4	9	12	9	14	15	29	23	25	15	27	199
2. Typhus fever													
3. Recurrent fever													
4. Intermittent fever and malarial cachexia	1		2	1	2	1	1	2	2	6			18
5. Small-pox					3	1							4
6. Measles		1				1	1	1	1			1	6
7. Scarlet fever	3	7	10	20	28	16	9	9	15	6	8	12	143
8. Whooping cough	4	2	4	5	3	2		3	1				24
9. Diphtheria and croup—													
a. Diphtheria	11	13	5	7	3	7	8	5	8	13	10	6	96
b. Membranous crop	4	1	3	1	1	1		1	1	2	3		18
c. Croup										1			1
10. Influenza (La Grippe)	4	33	47	17	10	3	1	1		2		4	122
11. Miliary fever													
12. Asiatic cholera													
13. Cholera nostras		1		1			1	2	1				6
14. Dysentery	3	3	4	1	2	4	11	11	10	1	3	1	54
15. Bubonic plague													
16. Yellow fever													
17. Leprosy													
18. Erysipelas	3	8	5	2	1	1	1		2		1	1	25
19. Other epidemic affections:													
a. Mumps		1	1									1	3
b. Varicella												1	1
c. Rubeola, etc													

20. Purulent infection and septicæmia	5	3	7	3	4	5	6	.....	4	5	3	7	52
21. Glanders and farcy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22. Malignant pustule and charbon	.....	.....	.....	.....	.....	....	.....	.....	.....	....	.....	.....	.....
23. Rabies	.....	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
24. Actinomycosis, trichinosis, etc	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
25. Pellagra	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
26. Tubercle of the larynx	3	3	1	2	3	5	1	.....	.....	3	.....	5	26
27. " " lungs	120	142	134	129	124	105	110	93	111	101	97	83	1349
28. " " meninges	3	4	7	16	9	8	2	8	3	3	1	5	69
29. " " abdomen	.....	4	2	1	2	5	4	3	5	4	2	4	36
30. Pott's disease	.....	.....	2	1	1	.....	.....	.....	.....	1	1	.....	6
31. Abscess—cold and by congestion	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
32. White swelling	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	2
33. Tubercle of other organs	2	1	1	1	4	1	.....	1	1	.....	3	1	16
34. Generalized tubercle	2	1	.....	.....	1	.....	2	4	2	1	.....	2	15
35. Scrofula	.....	.....	1	1	.....	.....	2	.....	.....	.....	.....	.....	4
36. Syphilis	4	4	3	7	2	1	4	1	5	5	3	4	43
37. Blennorrhagia of the adult	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
38. Gonococcic infections of children	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	.....	.....	.....
Cancers and other Malignant Tumors :													
39. Cancer of the buccal cavity	2	3	1	.....	.....	1	2	1	.....	1	1	.....	12
40. Cancer of the stomach and liver	12	8	12	15	19	12	19	16	9	17	14	23	176
41. Cancer of the peritoneum, intestines or rectum	3	2	3	3	5	3	6	2	5	2	1	6	41
42. Cancer of the female genital organs	9	6	6	2	8	5	5	8	7	5	5	5	71
43. Cancer of the breast	9	2	6	1	5	2	6	2	5	2	3	7	50
44. Cancer of the skin	2	1	1	1	1	.....	1	.....	1	1	.....	1	10
45. Cancer of the other organs, and organs not specified	6	9	7	6	8	5	10	4	5	12	12	6	90
46. Other tumors, (tumors of the female genital organs excepted)	1	.....	2	1	.....	2	1	1	.....	1	3	1	13
47. Rheumatism—acute and articular	9	8	9	4	7	6	5	5	5	3	6	7	74
48. Rheumatism—chronic and gout	.....	3	2	.....	1	1	.....	1	1	.....	2	.....	11
49. Scorbutus	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
50. Diabetes	7	5	5	4	5	11	2	2	1	6	6	3	57

TABLE XIII—Continued.

Diseases.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
51. Exophthalmic goitre								2	1				3
52. Addison's disease			1				1						2
53. Leukæmia	2			1	2		2	1			1	1	10
54. Anæmia and chlorosis	4	1	4	2	4	4	7		5	1	1	4	37
55. Other general diseases											1		1
56. Alcoholism—acute and chronic	4	5	6	3	1	1	4	1	2	7	1	6	41
57. Lead poisoning			1										1
58. Other professional intoxications	1												1
59. Other chronic poisonings					1								1
II.—Diseases of the Nervous System and the Organs of Sense.													
60. Encephalitis		1			1		1						3
61. Meningitis—													
a. Simple	6	11	4	4	8	8	14	8	6	3	10	12	94
b. Cerebro spinal	2	2	3	2	1	4	5	2	1	4	3	4	33
c. Cerebral	1	2	2	1	2	2		3	2				15
d. Spinal			1		1		1				1		4
62. Progressive locomotor ataxia	4		3	1			1		2	2	2	2	17
63. Other diseases of the spinal cord	1	2	2	3	1		1	3	1	3	2	2	21
64. Congestion and hemorrhage of the brain	37	27	25	34	45	25	30	25	27	29	36	41	381
65. Cerebral softening	4	1	2	1	2			3	3	2	3	3	24
66. Paralysis without specific cause	19	19	19	13	11	15	7	8	12	11	9	16	159
67. General Paralysis	4	2	2	3	1	2	3	2		5	6	2	32
68. Other forms of insanity					1							2	3
69. Epilepsy	1	2	1	1		1	1	3	1		1		12
70 Convulsions, not puerperal	2						1	2					5

71. Convulsions of infants	10	19	8	9	14	19	14	4	6	10	7	15	135
72. Tetanus	5	1	1	1	1	4	2	3	1	3		2	24
73. Chorea					1			1					2
74. Other nervous diseases	5	4	4	4	2	2	3	2	3	1	3	1	34
75. Diseases of the eye and its adnexa					1								1
76 Diseases of the ear and its adnexa			1	3						2		2	8
III.—Diseases of the Circulatory Apparatus.													
77. Pericarditis	1	4	1	2			2	1		2	2	1	16
78. Endocarditis	4	1	5	6	5	3	2	2	7	6	14	6	61
79. Organic heart diseases	61	79	74	69	65	37	45	50	58	53	47	56	694
80. Angina pectoris	3	3	3	5	3	2	4	3	4	6	4	4	44
81. Affections of the arteries, atheroma, aneurism, etc	17	14	20	12	15	13	13	14	10	6	7	13	154
82. Embolus and thrombosis			3				1		1	1	1		7
83. Affections of the veins, varices, hemorrhoids, phlebitis						1						1	2
84. Affections of the lymphatic system, lymphangitis, etc											1		1
85. Hemorrhages	2		5	4	3	1		1	1		1		18
86. Other diseases of the circulatory system												1	1
IV.—Diseases of the Respiratory System.													
87. Diseases of the nasal fossæ													
88. Affections of the larynx	4	1	1	1			1	1				1	10
89. Affections of the thyroid body					1					1	1		3
90. Acute bronchitis	20	22	20	12	5	2	3	4	11	11	7	7	124
91. Chronic bronchitis	23	19	28	19	14	6	4	8	3	6	11	22	163
92. Broncho-pneumonia	31	46	44	31	26	8	5	7	6	8	12	16	240
93. Pneumonia	132	157	146	84	64	28	15	20	17	38	81	99	881
94. Pleurisy		1	4	2	3	1	4	2	2	2	2	1	24
95. Congestion of the lungs (including pulmonary apoplexy)	4		7	5	2	3	2		3	2	3	6	37

TABLE XIII—Continued.

Diseases.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept	Oct.	Nov.	Dec.	Total.
96. Gangrene of the lung							1					1	2
97. Asthma	2	3	2	1	3	7		1	1	1	4	5	30
98. Pulmonary emphysema	3	2					1	1			2	2	11
99. Other diseases of the respiratory apparatus (phthisis excepted)	5		5	6	3	2	1	2	3		3	7	37
V.—Diseases of the Digestive Apparatus.													
100. Affections of the mouth and its adnexa			1										1
101. Affections of the pharynx		1											1
102. Affections of the œsophagus					1								1
103 Ulcer of the stomach	1	1	2		2	1	1	1	1	1			11
104. Other affections of the stomach (cancer excepted)	14	15	12	22	12	19	15	22	10	13	11	14	179
105. Diarrhœa and enteritis, under 5 years	7	10	5	7	10	56	274	178	75	28	12	9	671
106. Diarrhœa and enteritis, over 5 years	5	8	6	5	4	4	10	12	7	7		4	72
107. Intestinal parasites									1		1		2
108. Hernia and intestinal obstructions	2	9	5	2	7	4	12	6	6	6	4	5	68
109. Other affections of the intestines	2	1	1	3		7	1	2	1	4		2	24
110. Icterus gravis					1						2		3
111. Hydatid tumor of the liver													
112. Cirrhosis of the liver	7	5	6	5	8	5	2	13	6	7	4	2	70
113. Biliary calculi		3	3	1	1	2		1		2	1	2	16
114 Other affections of the liver	3	2	6	3	2	3	5	4	2	5	4	3	42
115. Affections of the spleen				1	1								2
116. Peritonitis (not puerperal)	3	4	2	1	4	5	4	4		5	2	2	36
117. Other affections of the digestive apparatus (cancer and tubercle excepted)					2								2

118. Appendicitis and abscess of the iliac fossæ	6	3	5	3	6	7	14	6	9	6	6	6	77
VI.—Diseases of the Genito-Urinary Apparatus and its Adnexa.													
119. Acute nephritis	5	5	10	6	7	4	3	3	5	5	20	2	75
120. Bright's disease	48	65	70	68	52	48	71	56	63	88	60	60	749
121. Other diseases of the kidneys and their adnexa	2	3	3	2	1	2	5	3	2	3	1	1	28
122. Calculi of the urinary tract					1								1
123. Diseases of the bladder	3	1		1	1		2	4	2	1	1		16
124. Diseases of the urethra (urinary abscess, etc)	1	1			1			1	1		1	1	7
125. Diseases of the prostate	2	1		1	2	2	3	4		1	2	2	20
126. Non-venereal diseases of the male genital organs													
127. Metritis			1	2							1	1	5
128. Uterine hemorrhage (not puerperal)							1						1
129. Uterine tumor (not cancer)		2		1	5	2		3	1	2		4	20
130. Other diseases of the uterus	1			2	1		2	1			1		8
131. Cysts and other tumors of the ovary			1	2		1					1	2	7
132. Other diseases of the female genital organs	2	3	1	1	3	1	2	1	1		1	1	17
133. Diseases of the breast (not puerperal, not cancerous)											1		1
VII.—The Puerperal State.													
134. Accidents of pregnancy	2		1		2	3	1	1			1	2	13
135. Puerperal hemorrhage	1	1	1	1					1		6		11
136. Other accidents of labor	1			1			1	1	1			1	6
137. Puerperal septicæmia	6	9	8	9	8	3	2	5	1	1		7	59
138. Puerperal albuminuria and convulsions	1			1	1	5	3	2	1			3	17
139. Phlegmasia alba dolens													
140. Other accidents of pregnancy—sudden death													
141. Puerperal diseases of the breast													

TABLE XIII—Continued.

Diseases.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
VIII.—Diseases of the Skin and Cellular Tissue.													
142. Gangrene	1	3	2	4	3	5	1	.....	1	.....	2	2	24
143. Furuncle (carbuncle)	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	2
144. Phlegmon—warm abscess	2	.....	1	2	1	.....	2	1	.....	.....	2	1	12
145. Other diseases of the skin and its adnexa (cancer excepted)	.....	.....	1	3	.....	.....	1	1	1	.....	.....	.....	7
IX.—Diseases of the Organs of Locomotion.													
146. Affections of the bones	4	.....	1	1	.....	3	3	2	1	.....	1	7	23
147. Arthritis and other diseases of the joints (tubercle and rheumatism excepted)	1	1	1	2	.....	1	.....	.....	.....	.....	.....	.....	6
148. Amputation (for unspecified disease)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
149. Other affections of the organs of locomotion	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
X.—Malformations.													
150. Malformation (congenital)	4	1	4	.....	2	4	4	5	3	5	1	3	36
XI.—Early Infancy.													
151. Congenital debility, jaundice and sclerema (premature birth)	48	45	48	33	46	44	61	50	52	42	35	41	545
152. Other diseases of infancy	1	3	2	1	3	3	.....	1	2	.....	.....	1	17
153. Lack of care (malnutrition, inanition, etc.)	19	21	28	23	13	20	42	25	30	15	45	16	297

XII.—Old Age.													
154. Old age, senile dementia, etc	29	22	18	26	21	11	14	18	20	2	21	15	236
XIII.—Affections Produced by External Causes.													
155. Suicide by poison		1	2	2	3	7	1	5	1	5	3	3	33
156. Suicide by asphyxia			2	2	1				1		1		7
157. Suicide by hanging or strangulation						1		1	1	1	1	1	6
158. Suicide by drowning									1				1
159. Suicide by firearms	1	4	1	3	3	2	4	4	1	2	2		27
160. Suicide by precipitation from a height										1			1
161. Suicide by cutting instruments	1				1	1	1					1	5
162. Suicide by crushing													
163. Suicide by other methods												1	1
164. Fractures:													
a. Of the femur	3	2	2	1	1	1	2	2	4	1		1	20
b. Of the skull	3		1	3	3	3	5	5	3	3	3	2	34
c. Of the vertabræ			1		1								2
d. Other fractures			3			1		1		1		1	7
165. Dislocation													
166. Other accidental injuries:													
a. Dystocia (child)	3		1	4	1	1		1	2		1		14
b. Electric shock							2		1	2		1	6
c. Falls	3	4	2	1	1	2	2	3	6	3		2	29
d. Gunshot	2			1			2	1	3	1	3		13
e. Mining accidents									1				1
f. Railroad accidents, etc	5	4	5	9	5	6	6	3	5	4	2	5	59
g. Vehicles and horses					1		1		1		1		4
167. Burning:													
a. Fire (burn)	6	7	8	3	3	4	3	4	2	8	10	6	64
b. Hot liquid (scald)	4	1	1		2	1		2		1			12
168. Burning by corrosive substances													

TABLE XIII—Concluded.

Diseases.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
169. Sunstroke (insolation)	.....	.....	.....	.....	.....	.....	6	.....	.....	.....	.....	.....	6
170 Freezing	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
171. Electrical disturbances	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
172. Accidental drowning	2	2	2	3	8	5	8	5	7	3	1	1	47
173. Inanition	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
174. Absorption of deleterious gases (suicide excepted)	2	1	.....	.....	1	.....	.....	.....	.....	.....	.....	1	5
175. Other acute poisonings	1	.....	1	1	2	1	1	2	1	1	1	.....	12
176. Other external violence:													
a. Homicide	1	2	3	.....	2	3	2	5	1	4	.....	1	24
b. Legal execution	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	2
c. Other accidents	3	2	4	4	3	4	3	2	3	.....	1	2	31
XIV—Ill-Defined Diseases.													
177. Dropsy	2	2	1	.....	.....	1	2	.....	1	1	.....	2	12
178. Sudden death (not puerperal)	.....	.....	4	2	1	2	.....	.....	.....	.....	8	8	25
179. Unspecified or ill-defined causes	9	7	11	4	7	3	19	27	22	14	10	16	149
Total	959	1024	1075	898	869	754	1071	919	810	780	793	866	10818

TABLE XIV.

SHOWING TOTAL DEATHS AND DEATHS FROM ZYMOTIC DISEASES FOR THIRTY YEARS, WITH PERCENTAGE OF DEATHS TO TOTAL MORTALITY FROM 1875 TO 1904, INCLUSIVE.

	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.
Total deaths, exclusive of still births	7,258	7,498	7,910	6,733	7,618	8,043	8,816	8,923	9,380	8,035	8,153	8,339	8,244	8,936	9,365	10,198	10,073	10,582	9,554	9,486	10,301	9,919	9,329	10,385	10,152	10,700	10,479	10,253	10,141	10,818
Death rate	22.33	22.38	22.60	18.44	19.30	20.41	22.37	21.81	22.93	20.77	19.55	19.98	19.16	17.87	17.40	22.41	22.14	23.25	20.99	20.84	20.76	19.60	18.43	19.19	18.76	19.77	19 63	18.70	18.30	19.26
Still births	560	588	538	655	620	636	651	677	701	746	650	718	669	694	784	800	811	813	770	721	666	678	706	748	706	682	672	659	741	710
Rate of still births to 1,000 inhabitants	1.70	1.75	1.53	1.79	1.57	1.61	1.65	1.71	1.71	1.82	1 59	1.72	1.60	1.63	1.84	1.75	1 78	1.78	1.69	1.58	1.34	1.33	1.39	1.38	1.41	1.46	1.30	1.26	1.39	1.31
DEATHS FROM ZYMOTIC DISEASES.																														
Diphtheria and croup	238	249	557	452	384	476	881	929	792	470	400	318	302	216	206	319	394	428	210	231	310	281	360	412	312	279	171	130	160	115
Fever—Scarlet	519	562	447	141	80	400	215	179	334	104	68	32	36	44	71	42	128	258	36	85	59	31	53	46	24	20	11	37	84	143
Fever—Typhoid	187	176	201	175	367	196	197	165	126	151	155	150	156	161	191	247	150	193	224	222	173	188	189	189	153	189	141	220	189	199
Fever—Cerebro-spinal	53	25	17	26	1	26	37	38	42	20	24	24	19	22	18	31	18	38	59	26	27	32	22	3	.....	41	28	29	29	33
Whooping cough	78	39	303	63	80	148	93	43	59	120	63	91	98	112	54	100	103	32	60	112	68	87	42	64	19	47	63	95	64	24
Measles	15	43	151	11	43	12	75	71	130	228	16	201	85	176	11	248	16	120	39	3	68	27	16	48	5	24	3	41	77	6
Small-pox	1	.....	.....	.....	1	1	1	11	551	633	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	7	2	4
Total zymotic diseases	1,091	1,094	1,676	869	956	1,259	1,509	1,976	2,116	1,094	726	817	696	731	551	987	809	1,069	628	679	705	646	682	762	514	600	417	559	605	524
Percentage of zymotic deaths to total mortality	15.03	14.59	21.18	12.90	12.53	15.65	17.11	22 14	22.25	1,351	8.90	9.78	8.46	8.18	5.88	9.67	8.03	10.10	6.57	7.15	6.84	6.51	7.31	6.85	5 06	5.60	3 98	5.45	5.96	4.84

TABLE XV.

SHOWING THE NUMBER OF CASES REPORTED AND MORTALITY FROM THE PRINCIPAL ZYMOTIC DISEASES DURING THE YEARS 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902 AND 1903,

COMPARED WITH 1904, WITH PERCENTAGE OF DEATH TO CASES RPORTED IN EACH YEAR.

DISEASES.	Cases reported in 1894.	Deaths reported in 1894.	Percentage of Deaths in 1894.	Cases reported in 1895.	Deaths reported in 1895.	Percentage of Deaths in 1895.	Cases reported in 1896.	Deaths reported in 1896.	Percentage of Deaths in 1896.	Cases reported in 1897.	Deaths reported in 1897.	Pecentage of Deaths in 1897.	Cases reported in 1898.	Deaths reported in 1898.	Percentage of Deaths in 1898.	Cases reported in 1899.	Deaths reported in 1899.	Percentage of Deaths in 1899.	Cases reported in 1900.	Deaths reported in 1900.	Percentage of Deaths in 1900.	Cases reported in 1901.	Deaths reported in 1901.	Percentage of Deaths in 1901.	Cases reported in 1902.	Deaths reported in 1902.	Percentage of Deaths in 1902.	Cases reported in 1903.	Deaths reported in 1903.	Percentage of Deaths in 1903.	Cases reported in 1904.	Deaths reported in 1904.	Percentage of Deaths in 1904.
Diphtheria	267	198	74 15	371	265	71.42	480	249	51.87	1491	347	23.27	2077	412	19.83	1780	312	17 52	1858	279	15 01	1169	171	14.62	972	130	13.37	1461	160	10.95	1272	115	9.04
Scarlet Fever	999	85	8 50	775	59	7.61	694	31	4 46	928	53	5.71	588	46	7.82	434	24	5.52	402	20	4 97	391	11	2.81	481	37	7.69	1224	84	6.86	1222	143	11.70
*Croup	142	33	23.33	258	45	17.44	173	32	12.65	129	13	10.07	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	98	3	3 06	2332	68	2.91	1002	27	2.69	659	16	2.42	1419	48	3.38	591	5	0.84	2770	24	0.86	466	3	0.64	1909	41	2.10	2203	77	3.50	344	6	1 74
Varioloid	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Varicella	53	1	1.88	40	.....	.....	68	2	2.94	47	1	2 12	119	.....	.....	183	.....	.....	192	.....	.....	199	1	0.50	231	.....	.....	256	.....	.....	334	1	0.30
Whooping Cough	320	112	35.00	171	68	39.76	266	87	32.87	213	42	19.71	335	64	19 10	129	19	15.83	239	47	19.66	257	63	24.51	395	95	24.05	233	64	27.47	78	24	30.77
Mumps	80	1	1.25	62	2	3.22	73	1	1.36	132	.....	.....	22	.....	.....	26	.....	.....	160	.....	.....	214	1	0.47	71	1	1.40	247	.....	.....	122	3	2 46
Typhoid Fever	.....	222	.....	*260	173	66.53	472	188	39.83	363	189	52.06	545	186	34.68	462	153	33.11	871	189	21.70	792	141	17.80	1086	220	20 26	768	189	24.61	916	199	21.72
Consumption	.....	1106	.....	.....	1141	.....	.....	1122	.....	.....	1047	.....	.....	1061	...	.....	974	.....	274	1056	385.40	384	1274	331.77	356	1297	364.33	551	1336	242.50	478	1514	316.74
Pneumonia	.....	790	.....	.....	933	.....	.....	884	.....	.....	759	.....	.....	889	.....	.....	898	.....	.....	1303	.....	.....	1147	.....	.....	1010	.....	.....	1101	.....	.....	1121	.....	.....
Cholera Infantum	.....	440	.....	.....	510	.....	.....	412	.....	.....	401	.....	.....	386	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	550	.....	.....	671	.....	.....

Cholera Infantum now included in Infantile Diarrhœa, etc.

*Croup included with Diphtheria.

TABLE XVI.

SHOWING THE NUMBER OF DEATHS ANNUALLY FROM TYPHOID FEVER DURING A PERIOD OF SEVENTEEN YEARS FROM 1888 TO 1904, INCLUSIVE, MALE AND FEMALE, WHITE AND COLORED, IN THE CITY OF BALTIMORE.

YEAR.	Estimated Population.	WHITE.			COLORED			Total Males.	Total Females.	Total Deaths.
		Males.	Females.	Total.	Males.	Females.	Total.			
1888	395,899	88	90	178	80	14	94	168	104	272
1889	404,498	88	93	181	23	20	43	111	113	224
1890	413,671	135	109	244	26	31	57	161	140	301
1891	426,917	82	75	157	13	19	32	95	94	189
1892	440,163	90	102	192	19	15	34	109	117	226
1893	453,409	108	120	228	11	16	27	119	136	255
1894	466,665	103	104	207	23	27	50	126	131	257
1895	479,907	82	75	157	21	14	35	103	89	192
1896	493,147	93	81	174	16	14	30	109	95	204
1897	506,398	99	76	175	20	14	34	119	90	209
1898	541,000	96	62	158	19	24	43	115	86	201
1899	541,000	67	52	119	18	16	34	85	68	153
1900	541,000	83	69	152	21	16	37	104	85	189
1901	518,000	66	44	110	11	20	31	77	64	141
1902	525,000	99	73	172	24	24	48	123	97	220
1903	533,000	79	58	137	26	26	52	105	84	189
1904	541,000	91	67	158	26	15	41	117	82	199

TABLE XVII.

COMPARISON OF DEATHS FROM ALL CAUSES, AND FROM SPECIFIED AND CONTAGIOUS DISEASES FOR TWENTY-EIGHT YEARS, FROM 1877 TO 1904, INCLUSIVE.

YEARS.	Population.	Measles.	Scarlet Fever	Typhoid Fever.	Croup.	Diphtheria and Pseudo-Membranous Croup.	Whooping-Cough.	Dysentery.	Cholera Infantum.	Children Under 5 yrs.	Total Mortality. All Causes.
1877	311,275	161	597	235	157	455	297	52	616	4,584	7,910
1878	318,182	11	141	176	149	303	63	41	343	3,372	6,733
1879	325,139	43	367	166	186	298	80	60	475	3,385	7,618
1880	332,313	12	400	196	173	293	148	57	503	3,602	8,043
1881	339,649	162	215	197	242	639	93	56	558	3,919	8,116
1882	347,142	71	179	165	122	707	43	62	390	3,755	8,923
1883	354,832	130	334	126	201	591	59	52	473	4,062	9,380
1884	362,668	228	104	151	127	343	120	43	496	3,643	8,293
1885	370,696	16	68	155	148	252	63	60	498	3,228	8,153
1886	378,903	201	32	150	128	190	91	84	485	3,565	8,339
1887	387,300	85	36	156	153	149	98	137	567	3,477	8,372
1888	395,899	176	44	161	98	118	112	167	654	3,881	8,936
1889	404,498	11	71	191	53	155	54	156	572	3,505	8,703
1890	413,671	248	42	247	45	274	100	212	507	4,117	10,198
1891	426,917	16	128	150	44	350	103	118	531	3,910	10,073
1892	440,163	120	258	193	47	381	32	109	661	4,443	10,582
1893	453,409	39	36	224	25	185	60	62	444	3,604	9,554
1894	466,655	3	85	222	33	198	112	72	440	3,761	9,486
1895	479,907	68	59	173	45	265	68	70	510	4,026	10,301
1896	493,147	27	31	188	32	249	87	82	412	3,728	9,919
1897	506,398	16	53	189	13	347	42	57	401	3,510	9,329
1898	541,000	48	46	189	50	362	64	82	386	3,939	10,385
1899	541,000	5	24	153	.....	312	19	.....	.....	3,319	10,152
1900	541,000	24	20	189	12	267	47	77	848	3,695	10,700
1901	518,000	3	11	141	7	164	63	49	726	3,391	10,479
1902	525,000	41	37	220	9	121	95	78	695	3,327	10,253
1903	533,000	77	84	189	8	152	64	40	550	3,102	10,141
1904	541,000	6	143	199	1	114	24	54	671	3,155	10,818

Financial Statement.

Original appropriations, salaries		$59,116 75
Transferred from Contingent Fund		1,200 00
Total credit		$60,316 75

EXPENDITURES.

Salaries to December 15, 1904.

Commissioner of Health, James Bosley, M. D.	$3,500 00	
Asst. " " C. Hampson Jones, M.D.	2,000 00	
Secretary, J. W. M. Kiger	1,562 50	
Assistant Secretary, Arthur D. Thompson	1,125 00	
Permit Clerk, Harry C. Andrews	1,041 62	
Registrar's Clerk, John H. Uhlenberg, 3 mos.	225 00	
" " J. E. Silcott, 3 mos	225 00	
" " G. C. Wedderburn, 6½ mos	487 50	
Laboratory Clerk, John A. Campbell	937 50	
Index Clerk, Charles A. Wall, Jr	937 50	
" Geo. C. Wedderburn, 6 mos.	450 00	
" W. E. Woodall, 6½ mos	487 50	
Nuisance Clerk, Francis X. Jenkins	937 50	
Inspector of Throats, Dr. W. P. Stubbs	833 25	
Medical Examiner, Dr. N. G. Keirle	1,562 50	
Asst. " " Dr. B. P. Muse	520 75	
Inspector of Bakeries, R. L. Weber	937 50	
Inspector of Dairies, George F. Schultz	937 50	
Driver of Funeral Wagon, A. Ritmiller, 7½ mos.	450 00	
" " " J. M. DeGoey, 5 mos.	300 00	
" " " E. F. Kelly	750 00	
Disinfector, Thos. E. Morse, 5 mos., 25 days.	385 98	
" Geo. W. Phillips	833 25	
" Chas. Busick, 6½ mos	433 29	
" H. Rush, 6 days	12 90	
Inspector of Plumbing, J. C. Mitchell, 1 mo.	100 00	
" " Wm. H. Mitchell, 11½ mos.	1,150 00	
Asst. " " John Ward	937 50	
" " " C. L. Putts, Jr.	937 50	
" " " M. E. Horn, 9 mos.	675 00	
" " " John Grady, 24 days	44 76	
" " " T. S. Griffin, 5 mos.	375 00	
" " " J. H. Pumphrey, ½ mo	37 50	
Amount carried forward	$26,130 30	$60,316 75

Amount brought forward	$26,130 30	$60,316 75
Inspector of Drainage, F. A. Ebberts	937 50	
Superintendent of Morgue, P. R. Glynn	937 50	
Complaint Clerk, W. E. Woodall, 5 mos., 10 d	399 97	
Commissioner's Clerk, E. Goldberg	833 25	
Chemist, Gustav W. Lehman	1,562 50	
Bacteriologist, Wm R. Stokes, M.D.	1,562 50	
Inspector of Food, W. B. Roth	937 50	
" " " Charles Knell	937 50	
" " " H. G. Wilson	937 50	
" " " E. C. Cooper	937 50	
" " " G. J. Fischer	937 50	
Laboratory Assistant, John Johns	437 50	
" " J. B. Weilage	187 50	
" " George Karl, 4½ mos	67 50	
" " George Raymond, 2 mos	30 00	
" " W. Lee, 6 mos	90 00	
" " Grover Benser, 9 mos	144 00	
" " Leonard Campbell, 3½ mo	56 00	
Telephone Operator, James Batchen	150 00	
Stenographer, Miss Amanda Duff, ½ mo	30 00	
Complaint Clerk, J. E. Silcott, 6½ mos	487 50	
Health Warden, 1st Ward, Dr. J. W. Williams	900 00	
" " 2d " Dr. H. E. Laroque	900 00	
" " 3d " Dr. J. Rosett	900 00	
" " 4th " Dr. T. H. Sudler, 5 mos	375 00	
" " 4th " Dr. H. K. Gorsuch, 7 "	525 00	
" " 5th " Dr. J. E. Heard	900 00	
" " 6th " Dr. J. T. Spicknall	900 00	
" " 7th " Dr. A. S. Gage	866 13	
" " 8th " Dr. J. W. France	900 00	
" " 9th " Dr. C. T. Buckner	900 00	
" " 10th " Dr. E. H. Hayward	900 00	
" " 11th " Dr. Claude Van Bibber	900 00	
" " 12th " Dr. T. L. Richardson	900 00	
" " 13th " Dr. D. S. Williams	900 00	
" " 14th " Dr. A. G. Barrett, 5 mos., 15 days	413 71	
" " 14th " Dr. William Caspari, 6 mos., 16 days	486 29	
" " 15th " Dr. J. L. Ridgely	900 00	
" " 16th " Dr. M. K. Warner, 7 mos	525 00	
Amount carried forward	$27,566 85	$60,316 75

Amount brought forward		$27,566 85		$60,316 75
Health Warden 16th Ward, Dr. George B. Scholl, 5 mos		375 00		
" " 17th " Dr. H. D. Lewis, 4 mos		300 00		
" " 17th " Dr. G. W. Hemmeter, 8 mos		600 00		
" " 18th " Dr. R. A. Warner		900 00		
" " 19th " Dr. M. G. Smith		900 00		
" " 20th " Dr. H. J. Hahn		900 00		
" " 21st " Dr. A. D. Driscoll		883 06		
" " 22d " Dr. A. T. Chambers		900 00		
" " 23d " Dr. H. L. Franks, 4 mos		300 00		
" " 23d " Dr. C. P. Erkenbrack, 8 mos		600 00		
" " 24th " Dr. L. J. Turlington		900 00		
		$60,280 71		
Unexpended balance		36 04		
				$60,316 75
Original appropriation, expenses				$13,854 00
Transferred from Contingent Fund				10,675 00
Total credit				$24,529 00

EXPENDITURES.

Livery, hiring and repair of wagons	$1,536 74	
Care of small-pox and suspects	10,976 71	
Publishing annual report	2,076 95	
Ice and incidentals for Morgue	477 34	
Laboratory supplies	924 20	
Disinfectants	1,005 14	
Vaccine virus	1,000 00	
Postage	1,027 07	
Antitoxin	2,091 25	
Fumigation	575 54	
Car fare	650 00	
Advertising	192 21	
Subscriptions to journals, etc	67 56	
Coffins for pauper dead	69 50	
Miscellaneous expenditures	1,152 29	
Care of city patients	10 00	
Typewriters	175 00	
Wagons for disinfection	191 50	
Rent 315 North street, Detention House	330 00	
Total expenditures		$24,529 00

QUARANTINE STATION.

Original appropriation, expenses	$6,200 00
Transferred from contingent fund for furnishing Detention House	1,500 00
Transferred from contingent fund for ice plow	200 00
Total appropriation	$7,900 00

EXPENDITURES.

Furnishing Detention House	$1,500 00	
Ice plow	200 00	
Market supplies	1,117 45	
Groceries	873 74	
General supplies	296 59	
Feed	293 10	
Coal and buildings	505 16	
Coal for hygeia	630 87	
Ice	1 20	
Disinfectants and fumigation	354 00	
Farm implements, fertilizers and seeds	197 95	
Hospital supplies	33 40	
Supplies for hygeia	346 52	
Car fare	30 00	
Hire of extra boat	150 00	
Gasoline and oil for launch	277 15	
Repairs to boats	1,032 78	
Bedding and dry goods	60 09	
		$7,900 00

QUARANTINE STATION.

EXPENDITURES ON ACCOUNT OF SALARIES TO DECEMBER 15, 1904.

Original appropriation	$11,901 05

EXPENDITURES.

Assistant Commissioner of Health, Dr. S. O. Heiskell	$3,000 00	
Assistant Quarantine Physician, Dr. T. W. Clark	1,912 50	
Captain No. 1, James C. Evans	812 50	
Engineer No. 1, John Crawford	750 00	
Engineer No. 2, John Kellner	750 00	
Captain No. 2, W. T. Green	750 00	
Fireman, Thomas Gilden	625 00	
Fireman, Bernard McMahon	625 00	
Messenger, George M. Streeper	625 00	
Gardener, J. L. Matthu	625 00	
Nurse, W. T. Armacost	625 00	
Laborer, John Sloan	62 50	
Cook, Sara Smith	250 00	
Laundress, Annie Potter	187 50	
Extra Nurse, Laura Dobson	128 00	
Extra Nurse, Robert Cook	10 00	
Unexpended balance	75 05	
		$11,838 05

REPORT

...OF THE...

Bacteriological Laboratory.

REPORT.

BALTIMORE, January 1, 1905.

DR. JAMES BOSLEY,

Commissioner of Health.

DEAR SIR: I hereby respectfully report upon the work performed in the Bacteriological Laboratory of the Sub-Department of Health for the year ending December 31, 1904.

BACTERIOLOGICAL EXAMINATION OF THE WATER SUPPLY.

The city water has been often examined, together with pumps, springs, wells, reservoirs and specimens of ice. The bacteria present in each cubic centimeter are first estimated, and the test for the presence of the colon bacillus is then applied. Table No. 1 will show the work in detail. Table No. 2 will show the examinations made of various specimens of milk.

SUMMARY OF TABLE No. 1.

This table shows that eight wells were examined and that two were bad, while six were good. One spring was examined and found good. The city water as it flows from the tap was examined seventeen times, and the colon bacillus was found in eight instances. Thus nine samples were found good and eight bad.

SUMMARY OF TABLE No. 2.

Sixteen samples of milk taken from persons supplying the city with milk were examined, and the colon bacillus was found in 1/1000 of a cubic centimeter in five cases, two more samples contained too many bacteria; namely, six and nine million per cubic centimeter, and seven samples were therefore pronounced bad, leaving nine good. Six samples were over 500,000 bacteria per cubic centimeter. This exceeds the maximum figure recommended by Dr. Park, of the New York City Board of Health.

WILLIAM ROYAL STOKES, M.D.,
Bacteriologist.

TABLE No. 1.

Tap, Stream or Well.	Date.	Colonies Per c. c.		Colon Bacillus.	Condition.
		Aerobic.	Anaerobic		
Specimen of ice, Girl's Latin School	Feb. 2	100	1	Negative in 1 and 50 c.c.	Good.
Pump, 610 Frederick avenue	Feb. 3	10800	1200	Present in 1 c.c.	Bad.
Windsor Hill	Mar. 19	50	1	Negative in 1 and 50 c.c	Good.
Mrs. Brooks, Cloverdale, Eutaw Place extended	April 29	660	20	Negative in 1 and 50 c.c.	Good.
Water from pump, Huntingdon avenue and Twenty-eighth street	April 25	40	20	Negative in 1 and 50 c.c.	Good.
Well, J. W. Staum, sent by Dr. Bosley	May 19	.....	2	Negative in 1 and 50 c.c.	Good.
W. H. Diffenderffer, pump, Garrison and Beach avenues	May 25	1000	100	Present in 1 and 50 c.c.	Bad.
Spring, Alex. Brown, Pennsylvania avenue and Liberty road	May 30	20	3	Negative in 1 and 50 c.c.	Good.
Thos. S. Eichelberger, 208 Sycamore street	July 1	150	120	Present in 1 and 50 c.c.	Bad.
Wise Bros.' factory, before passing through ice-coil	July 10	1200	420	Present in 50 c.c.	Bad.
Wise Bros.' factory, after passing through ice-coil	July 10	720	300	Negative in 1 and 50 c.c.	Fair.
Lake Clifton, before treatment with copper sulphate	July 30	480	6	Negative in 1 and 50 c.c.	Good.
Lake Clifton, after treatment with copper sulphate (and after a hard rain)	Aug. 4	3000	20	Negative in 1 and 50 c.c.	Suspicious; too many bacteria.
Lake Montebello, before treatment with copper sulphate	Aug. 8	5000	100	Present in 50 c.c.	Bad.
"Gate City" filter, after filtration through a "Perfect" filter	Aug. 11	75	.....	Present in 50 c.c.	Bad.
City water—laboratory tap	Aug. 11	150	15	Present in 50 c.c.	Bad.

Well, Haywood	Aug.	25	500		Negative in 1 and 50 c.c.	Good.
Dr. Charles E. Brack, filter	Sept.	1	3600		Negative in 1 and 50 c.c.	Suspicious; too many bacteria.
No. 1817 Falls road	Oct.	14	800	180	Present in 1 and 50 c.c.	Bad.
No. 1819 Falls road	Oct.	14	320	10	Present in 1 and 50 c.c.	Bad.
No. 1, Fort Wayne Electric Building	Oct.	18	360	20	Negative in 1 and 50 c.c.	Good.
No. 2, 838 Calverton road	Oct.	18	600	50	Negative in 1 and 50 c.c.	Good.
No. 3, 812 Calverton road	Oct.	18	42	6	Negative in 1 and 50 c.c.	Good.
No. 4, 847 Calverton road	Oct.	18	600	100	Negative in 1 and 50 c c.	Good.
Baltimore Athletic Club, tank. N. Charles street	Oct.	24	240		Present in 1 c.c	Bad.
Artesian well, Tyler Box Factory	Nov.	5	75		Negative in 1 and 50 c.c.	Good.
American Canning Co., City water	Nov.	5	1500		Negative in 1 and 50 c.c.	Suspicious; too many bacteria.
American Canning Co., City water through ice coil	Nov.	5	2400		Present in 1 and 50 c.c.	Bad.
Baltimore Athletic Club, tank, after two weeks	Nov.	15	Top 6000 Bot. 3000		Present in 1 c.c	Bad.
B. A. C., tank, before using copper sulphate	Nov.	22	2400		Negative in 1 and 50 c.c.	Suspicious; too many bacteria.
B. A. C., tank, 24 hours after using copper sulphate	Nov.	23	3300		Present in 1 c.c	Bad.
B. A. C., tank, 2 days after using copper sulphate	Nov.	24	6000		Negative in 1 and 50 c.c.	Suspicious; too many bacteria.
B. A. C., tank, 3 days after treatment with copper sulphate	Nov.	25	12000		Negative in 1 and 50 c.c.	Bad; too many bacteria.
B. A. C., tank, 4 days after treatment with copper sulphate	Nov.	26	7200		Negative in 1 and 50 c.c.	Suspicious; too many bacteria.
Sample of water brought in by Inspector Wilson	Nov.	23			Negative in 1 c.c	Good.
Baltimore Athletic Club, swimming tank	Dec.	1	1380		Negative in 1 and 50 c.c.	Suspicious; too many bacteria.
Baltimore Athletic Club, swimming tank	Dec.	17			Present in 1 c.c	Bad.

TABLE No 2—MILK.

SOURCE.	Date.	Colonies Per c. c.		Colon Bacillus.	Condition.
		Aerobic.	Anaerobic		
Wentz family, 423 Falls raod	Jan. 14	400000		Negative in $\frac{1}{1000}$ c.c.	Fair.
From No 30 Montebello avenue	Feb. 22	390000		Present in $\frac{1}{1000}$ c.c.	Bad.
Sent in by Dr. Hayward, health warden	Aug. 17	540000		Negative in $\frac{1}{1000}$ c.c.	Good.
American Canning Co , milk supplied to office force	Oct. 25	750000		Negative in $\frac{1}{1000}$ c.c.	Fair.
No. 1. S. L. Kerr, Green Ridge, Pa	Nov. 10	48000		Negative in $\frac{1}{1000}$ c c.	Good.
No. 2. F. B. Miller, Zinshein, Pa	Nov. 10	6000000		Negative in $\frac{1}{1000}$ c.c.	Bad; too many bacteria.
No. 3. Pious B. Wildasin, So. Branch, Pa	Nov. 10	9600000		Negative in $\frac{1}{1000}$ c.c.	Bad; too many bacteria.
No. 4. S. B. Brodbeck, Green Ridge, Pa	Nov. 10	450000		Present in $\frac{1}{1000}$ c.c.	Bad.
No. 5. Wesley Smith, Green Ridge, Pa	Nov. 10	1320000		Present in $\frac{1}{1000}$ c.c.	Bad.
No. 6. F. L. Grump, Green Ridge, Pa	Nov. 10	180000		Negative in $\frac{1}{1000}$ c.c.	Good.
No. 7. J. B. Miller, Zinshein, Pa	Nov. 10	60000		Negative in $\frac{1}{1000}$ c.c.	Good.
No. 8. F. L. Trump, Green Ridge, Pa	Nov. 10	25000		Negative in $\frac{1}{1000}$ c.c.	Good.
No. 9 T. B. Lynch, Green Ridge, Pa	Nov. 10	420000		Present in $\frac{1}{1000}$ c.c.	Bad.
No. 10. S. B. Brodbeck, Green Ridge, Pa	Nov. 10	4800000		Present in $\frac{1}{1000}$ c.c.	Bad.
No. 11. Pious B. Wildasin, So. Branch, Pa	Nov. 10	1:00000		Negative in $\frac{1}{1000}$ c.c.	Suspicious; too many bacteria.
No. 12. S. L. Kerr, Green Ridge, Pa	Nov. 10	4000		Negative in $\frac{1}{1000}$ c.c.	Good.

TABLE No. 3.

EXAMINATIONS OF SPECIMENS TO DETERMINE THE PRESENCE OF DISEASE.

Diphtheria, positive cultures	693
" negative cultures	2,425
" suspicious cultures	22
" unsatisfactory cultures	7
Diphtheria—Total cultures	3,147
Diphtheria—Positive cultures of school children's throats	4
" negative cultures of school children's throats	66
" suspicious cultures of school children's throats	0
Diphtheria—Total culture of school children's throats	70
Diphtheria—Positive cultures examined by Throat Inspector	218
Negative cultures examined by Throat Inspector	3,408
Diphtheria—Total cultures examined by Throat Inspector	3,626
Tuberculosis—Positive results	392
" negative results	792
" suspicious results	3
" unsatisfactory results	0
Tuberculosis—Total results	1,187
Typhoid fever—Positive reactions	615
" negative reactions	786
" suspicious reactions	153
" unsatisfactory reactions	17
Typhoid fever—Total reactions	1,571
Malaria—Positive results	2
" negative results	306
" unsatisfactory results	0
Malaria—Total results	308
Antitoxin—Units, supplied in indigent cases	2,574,000
" cases treated by Health Department	1,425
Vaccine virus—Tubes supplied by Health Department	56,790
Water—Complete examinations made	51
Milk examinations	14
Vaccine examination	1

TABLE No. 3A.

Showing the Total Number of Examinations for Physicians During the Past Eight Years.

Examinations	for diphtheria	15,686
"	of school children	5,816
"	for tuberculosis	7,526
"	for typhoid fever	5,796
"	of malaria	583
"	of miscellaneous specimens	247
"	made by Throat Inspector	17,993
	Total	53,647

TABLE No. 4.

CASES OF DIPHTHERIA TREATED WITH ANTITOXIN FURNISHED BY THE HEALTH DEPARTMENT FROM JANUARY 1, 1904, TO DECEMBER 31, 1904.

Cases.	Deaths.	Mortality.	Extent of Membrane.				Complications.					Cases Immunized.		
			Tonsils.	Tonsils and Pharynx.	Nasal.	Larynx.	Broncho-Pneumonia.	Nephritis.	Sepsis.	Paralysis.	Cardiac Paralysis.	Total.	Successful.	Diphtheria Developed.
450	38	8.4	134	263	32	87	1	1	0	3	8	382	381	1

Cases in which diphtheria bacilli were found	210	Percentage	21.8
Deaths resulting	12	Cases of laryngeal diphtheria	87
Percentage of mortality	5.7	Deaths resulting	18
Deaths from nasal diphtheria	7	Percentage of mortality	20.6

Mortality After Use of Antitoxin According to Duration of Disease at Time of Injection.	First day.	Second day.	Third day.	Fourth day.	Fifth day.	Sixth day.	Seventh day.	Eighth day.	Tenth day.	Two weeks.
Cases	164	149	77	28	10	7	8	1	2	1
Deaths	4	7	11	5	5	1	2	1	2	0
Percentage	2.4	4.6	14	17	50	14	25	100	100	.....

Mortality in cases not treated with antitoxin (Welch) ..... 42 1 per cent.
Average mortality in Baltimore for four years (1894, 1895, 1896, 1897) prior to the use of antitoxin 55.18 per cent.

USE OF ANTITOXIN IN THE TREATMENT OF DIPHTHERIA.

Table No. 4 shows that 450 cases of clinical diphtheria were treated with antitoxin furnished free by the department, and only 38 died, a fatality of 8.4%. In 210 cases the diphtheria bacillus was found by cultures, and only 12 of these cases died. This shows a most satisfactory result, since it gives us the very low fatality of 5.7%. This is the lowest figure which we have ever attained in verified cases of diphtheria. The fatality in nasal and laryngeal diphtheria remains high, as the respective figures of 21.8% and 20.6% show 381 cases.

Very satisfactory results have been achieved in the prevention of diphtheria in infected houses. Three hundred and eighty-two children were immunized against diphtheria by 1,000 units of diphtheria antitoxin, and only one case developed diphtheria.

REPORT OF THE THROAT INSPECTORS.

This report shows a slight increase over the work of the preceding year, and also contains some interesting figures concerning the reinfection of houses with diphtheria and scarlet fever. The number of test cultures made of the disinfections will be found in the report of the Superintendent of Disinfection.

In conclusion, I wish to commend the faithful services of Dr. C. W. G. Rohrer and Mr. John A. Campbell, Laboratory Clerk.

Respectfully submitted,

WM. ROYAL STOKES, M.D.,
Bacteriologist.

Report of the Chemist.

REPORT.

BALTIMORE, January 15, 1905.

Dr. JAMES BOSLEY, *Commissioner of Health.*

DEAR SIR—I have the honor to submit to you my report upon the Chemical Laboratory of the Health Department for the year ending December 31, 1904.

I

MILK.

1. *Work accomplished.*

The milk examinations from January 1 to December 31, 1904, amounted to 43,560 lots, aggregating 2,337,129 gallons (see Table No. 1.) The examinations for 1903 amounted to 2,158,496 gallons, showing that the two Milk Inspectors increased their examinations by 178,633 gallons.

In my report for the year 1903 I explained at length the changes made in examining milk. This was strictly followed during 1904, and, whilst the total consumption of milk for Baltimore shows a slight decrease as compared with 1903, the percentage of milk under examination has increased to about 30 per cent. of the total amount consumed. In round numbers the consumption of milk for 1904 may be placed at not more than 8,000,000 gallons.

During part of the year the supply of milk at the several railway stations was not up to the demand, and this, together with a falling off in the demand for ice cream and iced milk, caused by the remarkable cool summer of 1904, had a tendency of somewhat lessening the total consumption.

2. *Quality of Milk.*

The total amount of milk condemned and spilled during 1904 amounted to 528 lots, aggregating 2,756 gallons (see Table No. 1) as against 2,741 gallons during the previous

year. Considering that the examinations amounted to about 30 per cent. of the total milk supply, and applying the same ratio to the 70 per cent. which escaped examination we again find that only about 1-10 of 1 per cent. of the milk has been condemned and spilled.

I beg again to refer to my work done during the year 1903, embodied in my report for 1903, in which I dwelt upon the condition of our milk supply illustrated by Tables Nos. 2 and 3 of that report. The analyzing of samples of milk for a matter of comparison has been continued during 1904 with precisely the same result. It is hardly necessary to again tabulate these analyses as the conditions have not changed in the least. It is gratifying to be able to state that the milk supply during 1904 has been exceedingly satisfactory as far as quality and cleanliness is concerned. The work done during 1903 has brought its reward, and, since the Inspectors kept up their vigilance and insisted upon bringing offenders to terms, there need be no apprehension as to the condition of the Baltimore milk supply.

3. *Impure and Adulterated Milk.*

The milk condemned and spilled during 1904 amounted to 2,756 gallons as against 2,741 gallons during 1903, a difference of only 15 gallons. It again shows that the conditions have not changed in the least and that it is hardly necessary to copy page 99 of the Health Department report for 1903, which fully covers the subject.

II.

Water.

1. *City Water Supply.*

Table No. 2 illustrates the condition of our water supply. The samples, taken from different parts of the city, show the condition to be about the same as during previous years. Nitrites, indicating intestinal polution, were present in all samples except two.

2. *Pumps, Springs, Wells, etc.*

Table No. 3 enumerates the analyses of water from pumps, wells, springs, etc.

3. The total number of analyses made at the Chemical Laboratory of the Health Department include:

Milk	365
Water:	
City water supply	63
Pumps, springs, wells	102
Cellars, ponds, cesspools	147
Meat and sausage	263
Coal	180
Miscellaneous:	
Cakes, candies, bread, foodstuffs, preservatives, disenfectants, oils, lubricators, plaster, lime, etc	471
Total	1,591

Respectfully submitted,

G. W. LEHMANN,
Chemist.

TABLES.

TABLE No. 1.

Total Amount of Milk Examined and Spilled.

1904.	Examined.		Spilled.	
	Lots.	Gallons.	Lots.	Gallons
January	3,261	162,740	22	110
February	3,105	155,510	29	145
March	4,035	206,640	75	377
April	3,475	185 879	34	176
May	3,784	197,050	58	307
June	4,197	222,735	66	330
July	3,903	209,431	82	425
August	3,996	214,985	40	243
September	3,653	202,584	36	205
October	3,677	198,010	27	138
November	3,559	216,080	6	30
December	2,915	165,485	53	270
	43,560	2,337,129	528	2,756

TABLE No. 2.

COMPARISON ANALYSIS OF MILK FROM SHIPPERS TO RAILROAD STATIONS.

1904.		Specific Gravity	Solids.	Fat.
January 12	Fulton Station—Ezra C. Brown, Westminster	1.0305	15.35	6.22
" 15	North Avenue Station—D. P. Hollingsworth, Falston Creamery	1.0320	14.02	4.80
" 15	North Avenue Station—D. P. Hollingsworth, Falston Creamery	1.0325	14.06	4.85
" 28	Calvert Station—L. M. Keizer, Ashland	1.0322	14.62	5.40
" 29	Hillen Station—C. J. Hilbert, New Windsor	1.0300	15.44	6.40
February 2	Fulton Station—R. Reuben Saylor, Union Bridge	1.0330	16 49	6.55
" 3	North Avenue Station—H. N. Baldwin, Baldwin Station	1 0320	16.42	6 80
" 4	Calvert Station—E. Hambleton, Lutherville	1.0320	14.32	5 05
" 5	Hillen Station—O. Hull, New Windsor	1.0315	13 65	4.60
" 6	Woodberry Station—C. Irvin, Graystone	1 0308	14.25	5.24
" 7	President Street Station—J. Mitchell, Perryman's	1.0323	15 65	6.05
" 14	President Street Station—J. Mitchell, Perryman's	1.0290	15.10	5.60
" 18	Hillen Station—Hanover Produce Co., Culverton	1.0320	13 34	4.20
" 18	Hillen Station—Hanover Produce Co., Spurrier	1.0335	16.01	6.15
" 18	Fulton Station—Hanover Produce Co., Sinsheim	1.0300	12.84	4.24
" 26	Hillen Station—Hanover Produce Co., Spurrier	1.0330	15.08	4.85
March 4	Calvert Station—F. R. Royston, Phœnix	1.0322	14.81	5 46
" 12	Hillen Station—L. B. Rohrbaugh, Glenville	1.0322	15.23	5.55
" 17	North Avenue Station—G. Seiler, Hyde Station	1.0300	14.84	5.45
" 20	Woodberry Station—G. Blakley, Graystone	1.0300	14 03	5.20
April 2	Hillen Station—Nathaniel Bay, Finksburg	1.0285	13 86	5.50
" 13	Camden Station—Highland Farm Dairy, Carrollton	1 0280	12.36	4.25
" 15	Calvert Station—N. H. Ensor, Glencoe	1 0310	15.81	6.50
" 21	North Avenue Station—Thomas Peirce, Long Green	1.0310	14.60	5 55
" 30	Hillen Station—E. E. Stoner, Spring Mills	1.0320	13.78	4 60
May 18	Hillen Station—Wm. Epphart, Union Bridge	1.0290	13.31	4.95

TABLE No. 2—Concluded.

1904.		Specific Gravity.	Solids.	Fat.
May 20	Hillen Station—V. T. Caples, Glyndon	1.0270	14.10	6.05
June 11	Calvert Station—Walker Perdue, Monkton	1.0280	13.05	4.20
" 15	Hillen Station—Jos. J. Price, Westminster	1.0285	11.83	4.10
" 18	Hillen Station—E. D. Buckley, Green Ridge	1.0290	14.25	4.00
July 8	Calvert Station—Average sample from car	1 0295	14.44	4.10
" 9	Hillen Station—D. S. Danner, Porters.	1.0290	13.95	3.95
" 9	Hillen Station—C. Clenson, Union Bridge	1.0285	14.00	5.40
" 13	Fulton Station—Average refrigerator car	1.0300	14.20	5.35
" 11	President Street Station—Perryman's, average.	1.0300	14 62	5 80
" 14	North Avenue Station—Average sample, 20 cans	1 0305	15.92	5.95
August 13	Calvert Station—J. G. Lyttle, White Hall	1.0304	13.74	4 90
" 13	Calvert Station—J. E. Almont, White Hall.	1.0295	13.70	5.05
" 13	Hillen Station—Thomas G. Boram	1.0290	13.75	5.20
" 25	North Avenue Station—Homewood Station, T. Price.	1.0300	13.76	5.00
September 8	Camden Station—Sykesville, D. Shippley	1.0298	13 66	4.95
" 9	By electric cars from Ellicott City to Melrose Dairy.	1 0305	14.00	5.10
" 9	" " " Bernheimer	1.0300	13.64	4.90
" 9	" " " Olive Dairy.	1.0305	13.93	5.05
" 15	Hillen Station—Glenville, C. T. Myers	1.0308	13.72	4.80
" 22	Fulton Station—Medford, W. M. Englar	1.0300	14.30	5.45
" 28	President Street Station—Magnolia, Miss S. Sully	1.9305	14.18	5.25
	Averages—47 analyses	1.0305	14.298	5.203

TABLE No. 3.

COMPARISON ANALYSES OF MILK FROM MILK WAGONS AND DAIRIES.

1904.		Specific Gravity	Solids.	Fat.
January 12	Wagon—James R. Malone, 2671 Pennsylvania avenue	1.0304	14.89	5.86
" 20	" Magnolia Farm Dairy, Sheehan	1.0322	14.79	5.40
" 28	" Jersey Dairy Farm, Gallager	1.0300	15.45	6.50
" 29	" Gray Stone Dairy, A. G. Jones	1.0305	16.92	6.80
February 2	" J. W. Hartzell, 2025 Druid Hill avenue	1.0320	17.62	7.80
" 3	" Holmes & Waddington, 1422 Druid Hill avenue	1.0300	16.88	7.60
" 4	" John G. Zink, 1729 Light street	1.0325	12.71	3.60
" 5	" Wilson Farm Dairy, E. E. Hoey	1.0305	12.94	4.20
" 6	" G. N. Wilson, Woodberry avenue	1.0320	15.18	4.10
" 6	Store—G. C. Lantz, 845 Bank street	1.0305	12.52	3.86
" 10	Wagon—New Freedom Farm Dairy, H. E. Smith	1.0320	14.14	5.05
" 16	" James R. Malone, 2671 Pennsylnania avenue	1.0333	15.06	5.40
" 17	" No. 5, Pikesville Dairy	1.0320	15.22	5.80
" 18	" Jersey Dairy, John N. Stewart	1.0330	14.57	5.05
" 20	" Perryman's, J. H. Lovett	1.0312	13.88	4.85
" 25	" Rosewood Farm Dairy, M. Rosenberg	1.0328	12.78	3.60
" 25	" Bell Farm Dairy, H. A. Albaugh	1 0344	14.44	4.65
March 4	Dairy—Gardner's, Robert street and Druid Hill avenue	1.0305	14.96	5.93
" 4	Store—Mrs. Drachler, Preston street and Homewood avenue	1.0320	13.43	4.20
" 4	" S. Kropman, 127 N. Exeter street	1.0325	15.88	6.25
" 5	Wagon—No. 5, Gardner's New Dairy	1.0320	12.34	4.00
" 9	" Rock Farm Dairy, G. F. Kraemer	1.0310	14 06	5.04
" 10	" Windsor Heights Farm Dairy, Frank B. Dorsey	1.0290	14.02	5.40
" 11	" Standard Dairy, Kaplan	1.0320	15.22	5.80
" 12	Dairy Lunch—Johnnie Hopwood, Baltimore street	1.0335	15.09	5.60
" 12	" " Johnnie Hopwood Camden street	1.0300	14.06	5.20
" 16	Wagon—Bell Farm Dairy, O. B. Sloffer	1.0320	14.91	5.28

TABLE No. 3—Continued.

COMPARISON ANALYSES OF MILK FROM MILK WAGONS AND DAIRIES.

1904.		Specific Gravity	Solids.	Fat.
March 18	Wagon—Brook Farm Dairy Co., H. R. Hardy	1.0302	14 05	5.16
" 20	Dairy—Hampton Dairy, H. Williams	1.0300	14.03	5.20
" 20	Wagon—New Windsor Farm Dairy, Fred. B. Buck	1.0306	12.83	4.10
" 14	" Alburton Farm Dairy, F. Hauseman	1.0330	15.71	6.10
April 1	" Lily Farm Dairy, Fred. Brand	1.0300	14.96	5 95
" 1	Store—L. Kropman, 127 N. Exeter street	1.0320	15.66	6.15
" 9	Wagon—Montford Dairy, Wm. Thomas	1.0294	13 03	4.60
" 11	Bottled Milk—New Hygeia Dairy, Schier & Bro	1.0355	15.61	5.50
" 13	Wagon—Milford Dairy Farm, Harwick	1.0265	12 21	4.20
" 14	" Western Maryland Dairy, J. D. Baxter	1.0315	16.11	6.57
" 16	" to German Orphan Asylum, Crawther	1.0290	13.32	5.05
" 20	" Harford Dairy, H. E. Woods	1.0295	13.94	5.64
" 22	Store—227 Exeter street, L. Kropman	1 0290	14.70	6.04
" 23	Wagon—Northeastern Dairy, Jas. F Klima	1.0300	13.51	5.10
" 27	" Bellview Dairy, Geo. E. Johnson	1 0270	13.68	6.95
" 29	" South Baltimore Dairy, George Albaugh	1 0305	13.55	4.80
May 4	" Frederick Farm Dairy, A. Pastorius	1.0290	14.70	6.00
" 6	" Rose Hill Dairy, G. A. Pruett	1.0295	14.36	4.29
" 6	" Crystal Farm Dairy, C. Shipley	1.0310	12.36	3.60
" 11	" Clover Dale Farm Dairy, A. McCann	1.0311	14.16	5.10
" 13	" Cedar Farm Dairy, J. A. Bauer	1.0310	15.45	6.20
" 14	Lunch Room—J. Hopwood, Rohrbaugh, Glenville	1.0295	13.87	5.60
" 15	Wagon—Highland Avenue Dairy Farm, C. Winterling	1.0272	13.60	5.90
" 17	" Southeast Baltimore, E. Brauner	1.0285	11.22	3.20
" 22	" Willow Farm Dairy, J. N. Wright	1.0282	13.15	4.90
" 25	" Hunter Farm Dairy, S S. Arnold	1.0295	12.31	4.00
" 29	" J. N. Hoey, South Regester street	1.0270	12.16	4.15

May 29	Wagon—Henry Becker, Canton	1.0295	13.55	4.10
" 29	" J. Martin, Canton	1.0285	12.44	4.45
" 29	" New Hygeia Dairy, Schier & Bro	1.0320	13.72	4 55
June 2	" Montebello Dairy, A. G. Wolf	1.0295	15.35	5.60
" 5	Lunch room—9 South Eutaw street, J. F. Klitch	1.0300	11.83	3.60
" 9	Wagon—M. S. Ochs, North Gay street	1.0290	12.25	3.95
" 12	" Gold Wreath Dairy, Ed. A. Glaser	1.0294	12.80	4 60
" 16	" Lauraville, Baltimore county, J. M. Erdman	1.0305	13.94	5.05
" 19	" 2514 Mosher street, Charles Cook	1.0295	13.75	5.10
" 19	" Walbrook Dairy, 1215 Lexington street	1.0295	12.67	4.20
" 19	" White Oak Dairy, J. C. Letzau	1.0305	12.98	4.25
" 22	" Shiloh Farm Dairy, N. Long	1.0280	12.54	4.40
July 1	" Brightside Farm Dairy, 1816 Barclay street	1.0320	13.18	4.25
" 7	" Montebello Dairy, Wm. Wolf	1.0300	12.95	4.60
" 21	Melrose Dairy, 2022 East Baltimore street	1.0280	13.32	5.05
" 21	Melrose Dairy, from wagon	1.0280	12.54	4.40
" 23	Wagon—J. H. Miller, Baltimore county	1.0285	11.83	4 10
" 23	" Annapolis road, John Kess	1.0279	12.19	4 20
" 24	" Willow Spring Dairy, S. P. Needles	1.0290	11.29	3.15
" 30	" M. Romboro, Bank street extended	1.0300	12.62	4.05
" 31	" Spring Lake Farm Dairy, E. H. Pletzer	1.0305	15.09	6.00
August 6	German Orphan Asylum	1.0265	10.72	3.20
" 7	Wagon—Riverside Farm Dairy, Edw. A. Grill	1.0295	12.31	4.10
" 13	" Fair View Farm Dairy, George Bartholome	1.0292	14.04	5 40
" 14	" Fred. Gerkins' Dairy, Garrison lane	1.0300	13.04	4.40
" 14	" Fred. Scheneigert, 196 Jefferson street	1.0295	13.28	4.70
" 15	" Fulton Dairy, Robert Clark	1.0295	13.09	4.55
" 23	" Owings' Mills Farm Dairy, J. H. Disney	1.0295	13.75	5.10
" 29	" Mount Vernon Dairy, D. W. E. Bramble	1 0310	14.83	4.85
	Averages: 83 analyses	1.0303	13.805	4.981

TABLE No. 4.

Approximate Amount of Milk from Shippers to Railroad Stations.

Stations.	Gallons.	
Calvert Station—		
Gladfelter	400	
Smyser	640	
Hanover Junction	180	
Larue	55	
Glenrock	320	
Shrewsbury	265	
New Freedom	285	
Freeland	105	
Bentley	200	
Walker's	530	
Parkton	440	
Graystone	485	
White Hall	650	
Bluemont	70	
Monkton	950	
Corbett	140	
Glencoe	765	
Sparks	290	
Phœnix	260	
Ashland	30	
Cockeysville	275	
Texas	20	
Timonium	95	
Sherwood	45	
Lake Station	55	
	——	7550
Hillen Station—		
Shippensburg (Pa. Creamery)	1000	
York Road and Culbertson Creameries	1000	
Porter's	50	
Carrollton	50	
Green Ridge	40	
Western Maryland Station	40	
Hoffman	90	
Miller	50	
Glenville	180	
Finksburg	140	
Lineboro	295	
Gwynnbrook	325	

Stations.	Gallons.	
Hillen Station—Continued.		
Westminster	70	
Linwood	110	
Avondale	75	
New Windsor	135	
Mt. Wilson	40	
Owings' Mills	120	
		3810
Fulton Station—		
York Road, Sinsheim, Glenville and Lineboro Creameries	1000	
Union Bridge	105	
Linwood	370	
New Windsor	445	
Pipe Creek	190	
Wakefield	375	
Medford	405	
Avondale	190	
Spring Mills	250	
Westminster	415	
Carrollton	345	
Patapsco	285	
Finksburg	235	
Glen Falls	95	
Glyndon	235	
Timber Grove	220	
Gwynnbrook	160	
Owings' Mills	265	
McDonogh	50	
Mt. Wilson	80	
Pikesville	50	
		5765
Camden Station—		
Monrovia	375	
Plane No. 4	210	
Mt. Airy	350	
Watersville	70	
Morgan's	40	
Hood's Mills	90	
Sykesville	210	
Henryton	100	
Frederick Junction	40	
Marriottsville	65	
Woodstock	130	
		1680

Stations.	Gallons.	
North Avenue Station—(Md. & Pa. R. R.)—		
Cardiff	40	
Pylesville	250	
Highland	100	
The Rocks	430	
Fern Cliff	50	
Sharon	160	
Forest Hill	50	
Bynum	150	
Bel-Air	285	
Watervale	175	
Fallston	590	
Laurel Brook	75	
Baldwin	495	
Hyde	485	
Long Green	380	
Glenarm	65	
Notchcliff	85	
Summerfield	100	
Loch Raven	75	
Towson	175	
	——	4215
President Street Station—		
Perryman's	875	
Magnolia	235	
Edgewood	210	
	——	1320

SUMMARY.

	Gallons.
Calvert Station	7,550
Fulton Station	5,765
North Avenue Station	4,215
Hillen Station	3,810
Camden Station	1,680
President Street Station	1,320
	24,340

TABLE No. 5.

CITY WATER SUPPLY.

1904.	Volatile Solids.	Mineral Solids.	Total Solids.	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	Nitrates.	Nitrites.	Required Oxygen.	Hardness.
January	52	46	98	3.54	0.16	0.12	0.40	0.017	1.25	52.92
	64	48	112	3.50	0.12	0.16	0.38	0.010	2.10	52.85
	66	56	122	4.05	0.12	0.17	0.55	0.015	1.50	58.50
	40	60	100	3.24	0.13	0.20	1.06	0.010	1 65	58.80
February	40	30	70	3.00	0.06	0.12	1.35	0.010	1.06	52.90
	32	44	76	3.15	0.05	0.06	1.40	0.011	1.10	51.74
	40	30	70	3.20	0 06	0.11	1.10	0.001	1.00	51.75
	44	54	98	3.80	0.09	0.07	0.85	0.005	1.16	52.10
March	44	46	90	3.15	0.07	0.08	1.00	0.005	2.56	46.44
	50	16	66	4.00	0.05	0.09	0.90	0.001	2.65	34.83
	46	34	80	3.25	0 03	0.09	1.20	0.003	1.82	40.63
	48	43	91	3.16	0.04	0.08	1.06	0.002	1.76	44.40
April	36	54	90	3.55	0.03	0.08	0.60	0.001	1.65	43 40
	38	50	88	3.50	0 04	0.08	0.55	0.003	1.58	49.40
	42	55	97	3.60	0 05	0.10	0.83	0.001	1.70	48.21
	39	49	88	3.09	0 04	0.09	0.56	0.002	2.06	51.50
May	18	50	68	3 50	0.04	0.07	0.80	0.001	1.95	45.45
	28	61	89	4.05	0.05	0.10	1.10	0.002	2.00	49.20
	40	45	85	3.91	0.04	0.10	0.80	0 001	1.93	52.30
	30	50	80	3.60	0 03	0.08	0.51	0.002	1.51	53.00
June	24	64	88	4.00	0.06	0.10	0.75	0.001	1.49	55.10
	33	41	74	4.20	0.03	0 05	0.80	0.003	1.66	47.00
	44	47	91	3.80	0.04	0.06	0.62	0.001	1.83	48.48
	39	62	101	3.71	0.05	0.07	0.54	0.001	1.85	54.25

TABLE No. 5—Continued.

CITY WATER SUPPLY.

1904.	Volatile Solids.	Mineral Solids.	Total Solids.	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	Nitrates.	Nitrites.	Required Oxygen.	Hardness.
July	56	50	106	3 27	0.04	0.09	0.56	0.003	2.04	47.50
	50	50	100	3.90	0.04	0.11	0 88	0.001	1.76	50.52
	37	59	96	3.35	0.03	0.09	1.01	0 002	2.02	55.17
	42	52	94	3.08	0.05	0.13	0.83	0 001	1.93	49.16
August	36	66	102	3.48	0.02	0.05	1.25	0.000	2.15	59.31
	31	59	90	3.10	0.01	0.03	0.90	0.001	2.04	52.00
	41	54	95	5.42	0 03	0.09	0.76	0.002	1.88	46.95
	42	56	98	3.90	0.01	0.06	0.91	0.000	1 32	51 13
September	49	36	85	4.05	0.01	0.03	1.15	0.004	1 70	61.62
	38	41	79	3.61	0.02	0.05	0.73	0.000	1.45	49.40
	44	48	92	4.00	0.03	0.10	1.02	0 002	2.00	45 90
	28	60	88	3 30	0.02	0 07	0.91	0.001	1 62	50.04
October	32	66	98	3.88	0.02	0.15	0.96	0.000	1.60	59.35
	35	43	78	3.45	0.05	0.12	1 03	0.001	1.88	52.19
	52	34	86	3.50	0.01	0.04	0 85	0.001	1 72	61.64
	41	66	107	3.41	0.05	0.09	1.15	0.002	1.51	50 80
November	32	60	92	3.95	0.02	0.03	0.71	0.000	1 35	46.52
	40	55	95	3.36	0.01	0.04	0.69	0.001	2.04	60.50
	45	65	110	3.06	0.03	0.08	0.94	0.002	1 92	53.60
	40	40	80	4.10	0.02	0.05	0.73	0.001	1.68	55.00
December	35	63	98	4.65	0.02	0.03	0.64	0.000	1.78	49.07
	37	58	95	3.90	0.04	0.12	1.06	0.002	1.80	50.10
	29	47	76	3.20	0.03	0.08	0.80	0.000	1.71	49.00
	33	40	73	3.42	0.01	0.03	1.05	0.001	1.55	54.62

TABLE No. 6.

PUMPS, WELLS, SPRINGS, ETC.

1904.	Volatile Solids.	Mineral Solids.	Total Solids.	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	Nitrites.	Condition.
Boiled Water, Girls' Latin School	90	30	120	8.00	0.00	0.14	0 006	Good.
Melted Ice, Girls' Latin School	5	2	7	2.05	0.00	0 00	0.000	"
Dairy Spring, Sisters of Charity	14	29	43	3.10	0.00	0.02	0 000	Very good
Garden Spring, Sisters of Charity	24	51	75	3.50	0.00	0 02	0.000	" "
Edmonds' Well, Druid Hill Park	14	116	130	3.00	0.02	0.09	0.000	" "
Madison avenue entrance, Druid Hill Park	42	68	110	4.50	0 03	0.08	0.001	Suspicious.
Well, Kate avenue, George H. Numsen	.....	...	.....	280 0	0.12	0.21	0.001	Polluted.
Well, Windsor Mill road	72	142	214	23.0	0.03	0.17	0.002	"
Pump, Frederick road, Taylor	276	194	470	78 0	0.25	0 30	0.051	"
Pump, Clover Dale, Eutaw Place extended	24	36	60	7.00	0.01	0.02	0.000	Very good
Pump, Huntingdon avenue and Twenty-eighth street	260	154	414	99.00	0.16	0.35	0.018	Polluted.
Pump, J. R. M. Staum	102	174	276	34 00	0.95	1.26	0.080	"
Pump, J. Sewell Thomas	.....	.....	.....	17.50	0.06	0.16	0.008	"
Pump, Druid Hill Park, Druid Hill avenue	70	80	150	13.00	0.02	0 06	0.000	Good.
Pump, William Marcus	14	50	64	3.65	0.00	0.00	0.000	Very good
Pump, Garrison and Beach avenues	110	150	260	52.00	0.40	0.81	0.530	Polluted.
Pump, Liberty road, Walbrook	40	100	140	5.00	0.06	0.12	0.005	"
Pump, Hospital for Crippled Children	36	66	102	7.00	1.51	0.15	0 425	"
Pump, Walbrook and Liberty road	60	110	170	6.00	0.03	0 06	0.008	Good.
Pump, Winter's lane near Edmondson avenue	.....	.....	.....	16.50	0.38	0.60	0.000	Polluted.
Spring, Bayview Asylum	.....	.....	.....	4 00	0.02	0.03	0.000	Good.
Spring, near Boat Lake, Druid Hill Park	22	116	138	12.00	0.05	0.10	0.000	"
Spring, Silver Spring, Druid Hill Park	102	118	220	44 00	0.05	0.05	0 000	"

TABLE No. 6—Continued.

PUMPS, WELLS, SPRINGS, ETC.

1904.	Volatile Solids.	Mineral Solids.	Total Solids.	Chlorine.	Free Ammonia.	Albuminoid Ammonia.	Nitrites.	Condition.
Spring, Chrise Spring, Druid Hill Park	82	44	126	3.00	0.00	0.00	0 000	Good.
Pump, No. 1, Druid Hill Park	38	70	108	4 00	0.02	0.09	0.000	"
Pump, Falls road, Nos. 1801-1813				48 00	0.85	1.16	0.150	Polluted.
Pump, Falls road, No. 1817				57.00	0.15	0.25	0.045	"
Pump, Falls road, No. 1819				102.00	0.25	0.30	0.006	"
Pump, No. 812 Calverton road				96.00	0.03	0.07	0.008	"
Pump, No. 838 Calverton road				111.00	0.08	0 12	0.025	"
Spring, south side Calverton road				113.00	0.05	0.07	0 000	"
Pump, No. 847 Calverton road				260.00	0.06	0.09	0.010	"
Spring, near Mt. Vernon Shops	36	60	96	3 50	0.00	0.00	0 000	Good.
Artesian well, Tyler's Factory				8.50	0 00	0 00	0.000	"

Report of the Division of Plumbing and Drainage.

BALTIMORE, January 3, 1905.

JAMES BOSLEY, M.D.,

Commissioner of Health.

DEAR SIR: The following is the report of the work of the Division of Plumbing and Drainage for the year ending December, 31, 1904. The work in this division has been enormous, compared with the work of the year 1903, because of the extraordinary conditions resulting from the fire of February 7, 1904.

There was a demand for temporary locations, in which it was necessary for the plumbing to be remodeled.

There was a demand for permits from this division, and from the increased amount of permits that was issued, and judging from the amount of plumbing that was to be done in the Burnt District, I found it impossible to superintend the division with the present force of Inspectors. I then recommended the appointment of two additional Inspectors, which was granted.

I then divided the city into four districts, and placed an Inspector in each of the districts with good results.

I think we are now in a position to handle any work which will be submitted to this division.

The following is the amount of permits and inspections made and issued by this division:

Months.	Permits for plumbing.	Inspections of plumbing	Inspections of drains.	Sanitary Inspections.	Notices to abate nuisances.	Applications for permits.
January	36	88	74	4	4	39
February	96	148	82	16	8	23
March	171	428	69	180	0	79
April	180	496	109	120	47	106
May	219	510	95	151	64	115
June	170	506	153	350	40	96
July	204	474	216	201	20	76
August	210	722	179	104	24	76
September	153	687	145	187	43	73
October	185	495	128	140	42	97
November	154	704	92	150	8	91
December	139	609	64	199	21	80
Total	1917	5867	1406	1802	321	951

Respectfully submitted,

W. H. Mitchell,

Inspector of Plumbing.

Report of the Throat Inspector.

BALTIMORE, January 1, 1905.

JAMES BOSLEY, M.D.,

Commissioner of Health of Baltimore City.

SIR: I herewith submit a report of the work done in that division of your department under my charge for the year ending December 31, 1904.

Last year 4,703 diphtheria cultures were taken in all; 1,177 were taken by attending physicians, and 3,626 taken by me as Inspector of Throats representing this department.

The following tables show the number of cultures taken each month and the results of same.

Table No. 1 shows the cultures taken by attending physicians.

Table No. 2 shows the cultures taken by this department.

TABLE No. 1.

CULTURES TAKEN BY ATTENDING PHYSICIANS.

1904.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Negative...	113	52	51	32	43	22	31	59	155	192	88	64	902
Positive.....	27	34	22	20	10	15	11	10	21	66	14	25	275
Total.....	140	86	73	52	53	37	42	69	176	258	102	89	1177

TABLE No. 2.

CULTURES TAKEN BY INSPECTOR OF THROATS.

1904.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total
Positive.....	17	6	38	19	17	11	29	4	.....	30	28	19	218
Negative....	439	429	205	203	155	166	164	162	220	372	402	491	3408
Total.....	456	435	243	222	172	177	193	166	220	402	430	510	3626
Houses Visited.	141	97	89	89	50	51	59	48	76	128	126	150	1104

TABLE No. 3.

COMBINED TABLE SHOWING TOTAL NUMBER OF CULTURES TAKEN DURING THE YEAR 1904 FOR FUMIGATION.

1904.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November	December.	Total.
Positive.....	44	40	60	39	27	26	40	14	21	96	42	44	493
Negative....	552	481	256	235	198	188	195	221	375	564	490	555	4310
Total.....	596	521	316	274	225	214	235	235	396	660	532	599	4703

The difference in the percentage of positive cultures taken by attending physicians versus that taken by this department is at first appearance somewhat striking, but in reality is easily understood. The attending physicians as a rule take a culture only from the throat of the patient, with the request that if that culture is found free of diphtheria bacilli, this department is requested to take cultures from the rest of the inmates of the infected house. So in a large majority of cases this department only takes cultures after the patient's throat is found free from infection. Hence the much smaller per cent. of positive cultures.

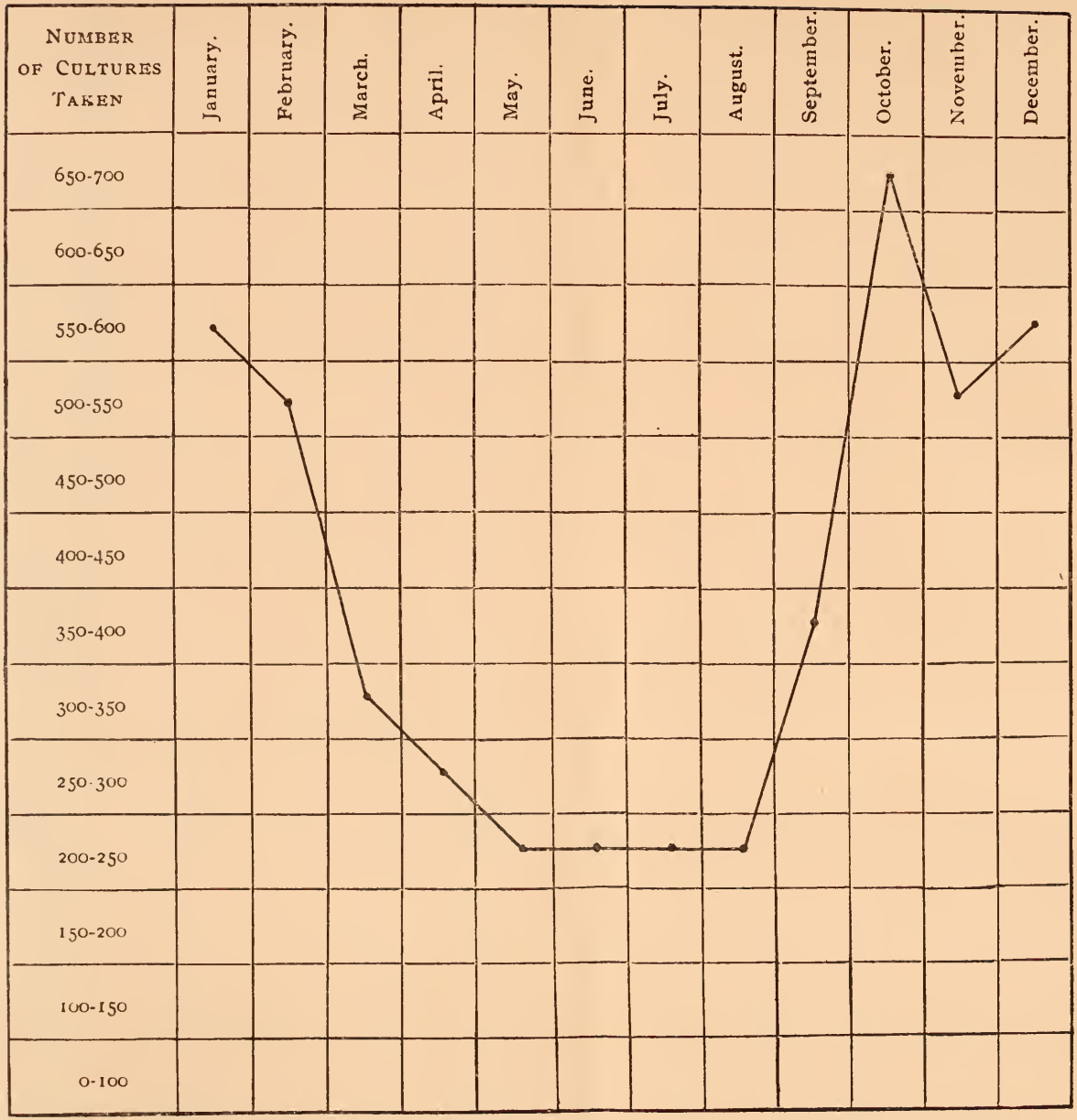
The following table shows the work of this year as compared to that of 1902 and 1903:

TABLE No. 4.

YEAR.	1902.	1903.	1904.
Number of culture taken	1905	4649	4703
" " positive	97	371	493
" " negative	1808	4278	4310
" " houses visited	782	1152	1104

While the increase of this year's work over that of 1903 is very slight, the net increase over 1902 is 150 per cent., or in other words over two and one-half times as many cultures were taken in 1904 as in 1902. Just what is the cause of this enormous increase I am unable to say.

The following chart illustrates the prevalance of diphtheria during the twelve different calendar months:


Number of Cultures Taken
January.
February.
March.
April.
May.
June.
July.
August.
September.
October.
November.
December.
650-700
600-650
550-600
500-550
450-500
400-450
350-400
300-350
250-300
200-250
150-200
100-150
0-100

While it is a recognized fact that diphtheria is a "cold weather" disease, and, therefore, much more prevalent during the autumn and winter months, I have never seen it more beautifully illustrated than in our work of last year. A glance at the chart shows the prevalence of diphtheria to almost rise and fall with the thermometer. The chart also immediately brings to mind the question as to just what part the public schools play as a cause of infection.

As the question of reinfections (*i. e.* a second case occuring after fumigation of the first) has been somewhat agitated of late, I have kept on account of these reinfections for the past year, with the following result. As a comparison I have also included scarlet fever reinfections.

	Scarlet Fever.	Diphtheria.
Number of disinfections for 1904	1018	1038
Number of reinfections for 1904	22	25
Percentage of reinfections for 1904	2.25	2.56

CHART No. 2.

CHART SHOWING LENGTH OF TIME BETWEEN FUMIGATION OF PRIMARY CASE AND REPORT OF SECOND CASE.

	Diphtheria.	Scarlet Fever.
Within one week	6 cases.	8 cases.
" two weeks	6 cases.	7 cases.
" three weeks	1 case.	2 cases.
" one month	3 cases.	2 cases.
" two months	2 cases.	2 cases.
" three months	3 cases.	.....
" four months	.....	1 case.
" five months	1 case.	.....
" six months	2 cases.	.....
" eight months	1 case.	.....

As to just what relation exists between these reinfections and the primary case, and as to just what part the fumigation of primary case bears to the reinfections, I most respectfully refer you to my report of last year, where the question is discussed at some length.

I will say, however, that I think the small amount of 2.56 per cent. reinfections in diphtheria and 2.25 per cent. reinfections in scarlet fever are no more than we should reasonably expect, and will, I am sure, compare most favorably to the reinfections from these two diseases in other cities.

Respectfully submitted,

WILBUR P. STUBBS, M.D.,
Inspector of Throats.

Annual Report of Nuisance Clerk.

BALTIMORE, December 31, 1904.

JAMES BOSLEY, M.D.,

Commissioner of Health.

DEAR SIR: I submit annual report of work done in this department for the year:

1904.	Permits to Clean Privies.	Number of Loads to Winans Dump.
January	1,260	1,502
February	973	1,210
March	5,191	5,252
April	11,288	9,690
May	6,699	9,540
June	6,083	7 926
July	4,528	6,070
August	5,377	6,610
September	3,447	4,396
October	3,775	4,209
November	2,288	3,191
December	1,577	2,294
Total	52 486	61,890

Very respectfully,

FRANK X. JENKINS,
Nuisance Clerk.

Report of Superintendent of the City Morgue.

BALTIMORE, January 1, 1905.

JAMES BOSLEY, M.D.,

Commissioner of Health.

DEAR SIR: I beg leave to hand you herewith a report of the number of bodies received at the Morgue in 1904, with a statement of the disposition of the same:

Number of bodies received		259
Whites	142	
Blacks	117	
Males	215	
Females	44	
Ages from 1 year to 10 years		20
11 " " 20 "		11
21 " " 30 "		44
31 " " 40 "		54
41 " " 50 "		58
51 " " 60 "		43
61 " " 70 "		18
71 " " 80 "		3

CAUSES OF DEATHS.

Drowning	32	Hemorrhage	6
Heart failure	18	Accident	26
Heart disease	18	Pleurisy	1
Nephritis	5	Rheumatism	1
Bright's disease	6	Exposure	3
Diphtheria	1	Spinal Meningitis	2
Apoplexy	7	Peritonitis	4
Pneumonia	22	Appendicitis	1
Homicide	9	Typhoid fever	4
Phitisis	2	Alcoholism	4
Cardiac failure	4	Asphyxia	1
Tuberculosis	24	Cirrhosis of the liver	1
Suicide	11	Asthma	4
Syncope	1	Euremia	2
Fractured skull	11	Heat prostration	1
Convulsions	1	Marasmus	2
Strangulation	2	Concussion of brain	1
Inanition	3	Diabetis	1
Congestion of lungs	1	Burns	2
Suffocation	2	Still-births	9
Poison	1	Coma and Myelitis	1

Bodies buried by friends	140
Bodies buried by city	117
Post-mortems held by Dr. N. G. Keirle	31
Bodies now at the Morgue	2

Respectfully submitted,

PATRICK R. GLYNN,

Superintendent.

Report of Commissioner's Clerk.

BALTIMORE, January 1, 1905.

JAMES BOSLEY, M.D.,
Commissioner of Health.

DEAR SIR: I have the honor to submit herewith an account of the work done by me during the year ended December 31, 1904.

Number of letters sent out	5,436
Number of notices sent to physicians	4,960
Number of notices sent to undertakers	250
Number of notices sent to hospitals	324
Number of notices sent to hotels	647
Number of notices sent to public schools	10,000
Number of notices sent to parochial schools	4,800
Number of notices sent to private schools	800
Number of notices sent to Sunday schools	12,000
Number of notices sent to dispensaries	3,000
Number of notices sent to factories	1,500
Number of notices sent to banks and business houses	2,500
Number of anti-smoke ordinances sent to hotels and dwellings	4,325
Number of monthly reports	5,400
Total	55,942
Number of culture tubes delivered to city stations	10,532

Respectfully submitted,

ELEAZER GOLDBERG,
Commissioner's Clerk.

Report of the Index Clerk.

Report of the Division of Fumigation and the Division Having Charge of the Burial of the Pauper Dead.

BALTIMORE, January 1, 1905.

JAMES BOSLEY, M.D.,
Commissioner of Health.

DEAR SIR: I herewith most respectfully submit a report of the division in my charge, including a table of fumigations and their results, together with a detailed report of the pauper dead and the disposition of the same. There is a complete record in this division covering all possible ascertainable facts in each and every case. The tables show where the bodies came from and the disposition of the same.

FUMIGATIONS CLASSIFIED BY DISEASES.

	1903.	1904.
Bright's disease	1	.....
Bronchitis	1	.....
Cancer	9	5
Chicken-pox	.....	1
Diphtheria	1,182	1,038
Erysipelas	11	4
Gangrene	.....	1
Lupus	1	.....
Lock-jaw	1	1
La grippe	2	1
Measles	18	9
Pneumonia	1	4
Scarlet fever	980	1,018
Small-pox	30	24
Septicemia	3	1
Septic infection	2	.....
Tuberculosis	137	235
Typhoid fever	15	12
Tonsilitis	1	.....
Unknown	6	8
Vermin	.....	3
Whooping cough	.....	2
Total	2,401	2,367

RESULTS OF FUMIGATION.

	1903.	1904.
Negative	1,733	1,606
Positive	366	438
Unreturned tubes	238	152
Returned empty	64	55
No cultures		60
Cultures returned broken		56
Total	2,401	2,367

Statement of dead bodies turned over to the Anatomical Board by the Commissioner of Health, under Act of the General Assembly of Maryland, Chapter 163, 1882, to be used only to promote medical science in the State of Maryland and the Medical Schools of Baltimore city, January 1 to December 31, 1904, inclusive:

	1903.	1904.
Adults	249	348
Between 1 and 5 years	13	33
Under 1 year	240	242
Still Births	218	202
Total	720	825
Males	437	511
Females	261	293
Unknown sex	22	21
Total	720	825
Whites	229	248
Blacks	476	570
Unknown	15	7
Total	720	825

The bodies were received from the following hospitals and institutions:

	1903.	1904.
Bayview	99	140
Baltimore City Hospital	28	38
Baltimore City Jail		1
Central Police Station	3	7
Eastern Police Station		1
Garrett's Hospital	1	5
Good Samaritan	5	1
Friendsbury Place		15
Franklin Square Hospital		1
Hebrew Hospital		1
Homœpathic Hospital	8	9
Johns Hopkins Hospital	36	51
622 W. Lombard street	39	37
817 Linden avenue	22	8
115 W. Lombard street	16	1
Maryland General Hospital	16	34
Marine Hospital	1	
Mt. Wilson, Md	4	11
Miscellaneous (private houses)	250	221
Morgue	44	69
Nursery and Child's Hospital	35	13
Northwestern Police Station	9	8
Northeastern Police Station	2	5
Northern Police Station	1	7
Penitentiary	3	8
Provident Hospital		2
St. Agnes' Hospital	3	
St. Elzabeth's Home	60	87
St. Joseph's Hospital	12	16
Little Sisters of the Poor	1	1
Southern Police Station	3	8
Southwestern Police Station	2	2
Sparrow's Point		1
University Hospital	15	16
Western Police Station	2	
Total	720	825

DISPOSITION.

	1903.	1904.
Baltimore Medical College	116	83
Bond Street		3
College Physicians and Surgeons	271	284
Homœpathic College	5	1
Dr. J. G. Holliday		1
Johns Hopkins Medical College	186	398
Maryland Medical College	9	15
Medical Chirurgical College		5
St. Joseph's Hospital		1
Potter's Field		1
University of Maryland	99	31
University School of Medicine	1	
Woman's College	3	2
Total	720	825

TOTAL NUMBER OF DEAD BODIES HANDLED BY HEALTH DEPARTMENT

	1903.	1904.
Buried in Potter's Field	12	15
Surrendered to friends for burial	11	12
Transferred to Anatomy Board	709	813
Total	732	840

Respectfully submitted,

WM. E. WOODALL,

Index Clerk.

Report of the Registrar's Clerk.

BALTIMORE, January 1, 1905.

JAMES BOSLEY, M.D.,
Commissioner of Health.

SIR: I respectfully submit the following report of the work of issuing Transcripts and the Indexing of Births for the year ending December 31, 1904. The total receipts from the former, paid the City Comptroller, amounted to $538.00.

The following table will show the number written each month, and for what purposes:

TRANSCRIPTS.

1904.	Births.	Deaths.	Pensions.	Insurance.	Legal, Domestic.	Legal, Foreign.	Not stated.	Schools and Service.	State Burials.
January	2	84	14	37	32	3	.....	.....	86
February	2	66	11	43	11	3	.....	.....	68
March	.....	100	20	69	8	1	.....	.....	100
April	5	98	21	56	13	5	4	.....	103
May	2	92	24	48	17	2	.....	.....	94
June	2	81	18	55	7	1	2	.....	83
July	3	88	15	55	8	4	3	.....	91
August	11	84	17	51	15	1	6	3	95
September	2	64	20	29	12	1	1	2	66
October	6	89	16	58	10	4	1	.....	95
November	2	77	15	44	4	5	.....	2	79
December	7	115	25	68	19	.....	2	2	122
Totals	44	1038	216	613	156	30	19	9	1082

BIRTHS INDEXED.

January and February, 1904	1,500
March, April, and May, 1904	5,985
June 1 to December 31, 1904	38,080
Total, 1904	45,565

I also report how far each letter has been indexed, viz:—Letters A, C and F, July, 1883, to November, 1887; B, June, 1883, to August, 1888; H, May, 1883, to February, 1888; D, June, 1883, to November, 1887; E, G and I, August, 1883, to 1887; J, September, 1883, to November, 1887; K, L, Mac's, O, S, T and Y, February, 1883, to November, 1887; M, February, 1883, to May, 1892; N, May, 1883, to November, 1887; P, April, 1883, to November, 1887; Q, March, 1883, to April, 1885; R, March, 1883, to November, 1887; U, January, 1883, to October, 1885; V, March, 1883, to May, 1885, and the W's, February, 1883, to February, 1896.

Yours respectfully,

GEO. C. WEDDERBURN,
Registrar's Clerk.

Report of the Index Clerk.

JAMES BOSLEY, M.D.,

Commissioner of Health.

DEAR SIR: I respectfully submit to you my report of the work done by me for the year ended December 31, 1904:

Deaths indexed	10,818
Births indexed	8,599
Vaccination cards indexed	13,788
Births recorded	15,820

In addition to the above work, I assorted and got ready to be bound 85,499 death certificates and 18,500 returns of births.

In conclusion, would say that the births are now recorded up to and including February 8, 1901, and within the present year I will have the records of births complete.

Respectfully submitted,

CHARLES A. WALL, JR.,

Index Clerk.

Report of the Burial Permit Clerk.

BALTIMORE, January 1, 1905.

JAMES BOSLEY, M.D.,

Commissioner of Health.

DEAR SIR: I hereby respectfully submit the report of the work done by the Burial Permit Clerk for the year ending December 31, 1904.

The following table exhibits a summary of the various kinds of permits issued during the year:

MONTHS.	Burial Permits, City.	Burial Permits, Transit.	Burial Permits, Still Births.	Burial Permits, Shipping.	Burial Permits, Disinter.	Removal Permits.	Total.
January	959	103	76	132	13	260	1,543
February	1,024	94	61	110	8	280	1,577
March	1,075	110	61	134	23	357	1,760
April	898	90	44	107	38	223	1,400
May	869	81	55	108	79	217	1,409
June	754	93	69	66	31	189	1,202
July	1,071	82	49	94	17	279	1,592
August	919	105	64	100	19	242	1,449
September	810	74	59	101	32	237	1,313
October	780	88	53	108	62	225	1,316
November	793	94	63	81	43	295	1,369
December	866	78	57	99	21	323	1,444
Total	10,818	1,092	711	1,240	386	3,127	17,374

During the year there were received from cemeteries and transportation companies 14,247 burial, disinter and shipping permits, which have been placed in numerical order, and the same have been filed for reference.

Respectfully submitted,

HARRY C. ANDREWS,
Burial Permit Clerk.

REPORT

— OF THE —

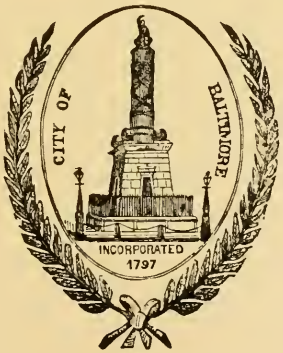
Topographical Survey Commission

— TO THE —

MAYOR AND CITY COUNCIL OF BALTIMORE

— FOR THE —

FISCAL YEARS ENDING DECEMBER 31, 1903 AND 1904



BALTIMORE, MD.
WM. J. C. DULANY CO.,
PUBLIC PRINTERS.

1905

MAYOR'S OFFICE,

BALTIMORE, MD., April 1, 1905.

To the Honorable, the Mayor and City Council of Baltimore:

The Topographical Survey Commission would respectfully submit the following satisfactory report of the Chief Engineer of the Topographical Survey.

Very respectfully,

[SIGNED] E. CLAY TIMANUS, *Mayor,*

GEORGE R. HEFFNER, *Comptroller,*

HARRY F. HOOPER, *Register,*

Topographical Survey Commission.

REPORT

—OF THE—

CHIEF ENGINEER

—TO THE—

TOPOGRAPHICAL SURVEY COMMISSION

FOR THE YEARS 1903 AND 1904

City of Baltimore Topographical Survey.

BALTIMORE, December 31, 1904.

To the HON. E. CLAY TIMANUS, *Mayor,*
HON. GEORGE R. HEFFNER, *Comptroller,*
HON. HARRY F. HOOPER, *Register,*
Topographical Survey Commission.

GENTLEMEN: I have the honor herewith to submit the following report of the work done by this Department during the years of 1903 and 1904, together with such recommendations as have appeared to be necessary to further improve the effectiveness of making surveys and collecting data for the benefit of the municipality.

REPORT FOR THE YEAR 1903.

I beg to state that the delay in submitting this report was caused by the fire which occurred in our city on February 7 and 8, of the year 1904, the result of which crowded this Department with much extra work and taxed its limited force to the utmost. I am, however, much gratified with the earnest manner in which those associated with me applied themselves to the work so suddenly thrust upon them, an account of which will be given in the next annual report.

The general work of the Department has been carried on, and the final computations were made for the establishment of the streets in a large area in the northwestern and western section of the Annex, in conformity with the General Plan of Streets for the Annex adopted under Ordinance No. 129 and approved December 3, 1898.

An outline of the system employed in this work is given in my reports of 1901 and 1902, under the head of "Street Projection Work."

SPECIAL WORK DONE.

In addition to the regular work on the general street plan, the following was done:

(*a*) A complete topographical survey on the scale of 100 feet to one inch was made of the new Bayview property, and a plat of the same, in connection with the old property, was prepared and delivered to the Board of Charities.

(*b*) Various surveys in connection with the extension of Wyman Park.

(*c*) A survey covering the division line between the old Marine Hospital grounds and the property of the Martin Wagner estate.

(*d*) Relocating part of the western and southern boundary lines of the city.

(*e*) Preliminary surveys for the opening of Baltimore, Lombard, Eleventh, Fourteenth, Seventeenth streets, and a street connecting Baltimore and Lombard streets.

(*f*) Survey and plat for the dedication of Calvert street from 25th to 31st street.

(*g*) A number of surveys for the City Engineer, including a survey of Covington street from Cross street southerly, a survey of Beech street near 7th street, North avenue near 6th street, Jefferson street near Montebello avenue, Clifton avenue from 10th street to Chelsea Terrace, and 10th street from Walbrook avenue to Chesapeake avenue.

RECOMMENDATIONS.

I beg to herewith submit the following recommendations for your consideration:

I wish again to call attention to a recommendation made two years ago that an ordinance be passed, requiring all persons who desire to build, before the permit is granted, to first submit to the Chief Engineer of the Topographical Survey, in

duplicate, a plat of convenient size and scale, showing in outline the lot or lots as situated relative to the adjacent highways, the ground plan of the proposed building or buildings, their relative position to the highway and other necessary information. If the plat so submitted meets with the necessary requirements, the Chief Engineer of the Topographical Survey will approve the plat and retain one copy; the other copy, together with the application, will be submitted to the Inspector of Buildings by the party making the application. The advantages gained to the city by enforcing such a requirement are very great, for, with practically no additional expense to the municipality, a record of the exact location of each improvement may be kept. The lack of a well organized system for this purpose makes the gathering of this information a continued source of extra labor and expense.

There have been several applications and there are calling needs for the opening of streets in the Annex which do not conform to the General Plan of Streets for that section. These streets have been suggested, after careful study, to be the best for the development of the section through which they pass. No matter how great their merit there is no way in which they can be opened because of the section in the City Charter which forbids the opening or the accepting of streets, by the city, which do not conform with those laid down on the General Plan of Streets prepared by the Topographical Survey. The plan of streets accepted by the city in 1898 was in the main intended to be a guide in the opening of streets, and should not hold the development in every case strictly along its lines. As time goes on, and as new conditions arise, it is very often found that the location of a street should be changed to meet these conditions. It is therefore recommended that the following amendment be made to Chapter 453, Act of 1902:

That no avenues, streets or alleys within the territory annexed to the City of Baltimore by the Act of 1888, Chapter 98, shall hereafter be opened, established or condemned, nor shall the dedication of any ave-

nue, street or alley in said territory be hereafter accepted by the Mayor and City Council of Baltimore, unless the same shall be approved in writing by the Topographical Survey Commission, consisting of the Mayor, Comptroller and Register of the City of Baltimore, or unless the said avenues, streets or alleys be so opened, established, condemned or dedicated that the lines and grades thereof shall conform to the general plan of streets for the Annex, as adopted under Ordinance No. 129, appproved December 3, 1898, or as said place shall be amended in accordance with the provisions of section, that is to say: with the approval of the aforesaid Topographical Survey Commission; the Mayor and City Council of Baltimore may thereafter by ordinance open, establish or condemn, or the Mayor of Baltimore City may receive a deed for any avenue, street or alley laid down on the said general plan of streets as amended, or if any avenue, street or alley shall be dedicated, the same may thereafter be accepted. Said Topographical Survey Commission is hereby authorized to make such rules and regulations regarding surveys, plots or plans relating to the location of avenues, streets or alleys as they may deem proper from time to time.

I desire to recall to mind the recommendation of last year in regard to the establishing of rules for the subdivision of land, and which will give to the city accurate information as to the location of streets to be dedicated or deeded. A set of rules which would meet the conditions generally may be found in my report of last year. These rules were formulated after a careful study of the question and are based upon those now in force in the City of Washington, D. C.

Much difficulty has been encountered by the Department as well as all other persons in the relocation of old property lines. This is very largely due to two reasons, first: in the vast difference between the measurements of a given line, and second: in the difference of the magnetic bearing of a given line. The time has passed when it is possible in a city to obtain the correct bearing by aid of the magnetic needle. Knowing this fact the Topographical Survey in its beginning made a series of observations and established a true meridian, which meridian has been used by the Survey in all its work. A unit of length was also established by the Survey, and an accurate method of measuring was adopted, and in accordance with these all subsequent measurements have been made.

In order to lessen, to a very large extent, the difficulty recited above, it is suggested that all surveyors doing work within the city be required to use as their standard those now in use by this Department. It is very gratifying to note that one surveying firm in the city has already adopted the meridian of the Survey as well as its system of co-ordinates.

As the size of the city increases the need of a good system of surveys as to street and property lines becomes more urgent. At the present time, Baltimore has no system of importance and there is no uniform establishment of property and street lines, except in the case of street lines in the Annex, which conform to the General Plan of Streets for that section, and which are determined by this Department. This matter is of such importance that it should demand immediate attention and the very best system should be established.

After a very careful study of the system used in the City of Philadelphia, I recommend that a similar system be established here, the genral features of which are as follows:

There should be established, as one of the sub-departments of the Department of Public Improvements, a department, the head of which should be appointed by the Mayor in the manner prescribed in Section 25 of the City Charter, who shall be known as the Surveyor-in-Chief and who should have had at least five years' experience as a surveyor; the said Surveyor-in-Chief to have charge of all official surveys made in the City of Baltimore, and should be a member of the Board of Public Improvements.

The territory of the city should be divided into a convenient number of Districts, and a District Surveyor and Regulator should be appointed for each District by the Surveyor-in-Chief, and should have had at least three years' experience as a surveyor.

The District Surveyors should survey and lay out their respective Districts and keep an accurate record of all work done.

There should be a Board, known as the Board of Surveyors, which should be composed of the City Engineer, the Surveyor-in-Chief and the District Surveyor of each District, of which the City Engineer should be President.

The Board, under the direction of the Mayor and City Council, should have power to alter lines and revise grades of any street or

streets which may have been laid out or opened upon any of the public plans or otherwise.

The Board should have full authority to examine and finally confirm or reject all plans of surveys of streets or revisions of plans of streets of the city when the same have been made by direction of the Mayor and City Council. No plan for streets or revision of plan should be finally acted upon by the said Board until a public hearing of the plan shall have been publicly advertised in the daily papers twice per week for at least six weeks prior thereto, and upon the confirmation of any plan of survey by the said Board, the seal of the said Board should be affixed, said confirmation should be final and without appeal.

No street should thereafter be added to any confirmed plan of the city, or be called a public street until the same shall have been approved by the said Board as to location, width and grades, and shall extend from street to street as a thoroughfare.

It should be the duty of the Board of Surveyors to have a correct list of all the names of the highways of the city made out, and keep the same on file in their Department. The name of any new street or highway should be submitted to the said Board for its approval; said name to be unlike any now in use in the city before said street or highway shall be dedicated to public use.

No person should be allowed to lay the foundation of any building or party wall before they have had the street and property lines laid down by the Surveyor and Regulator of the District.

Registry of Deeds.

There should be established, under the direction of the Surveyor-in-Chief, a set of books of plans of the city, divided into sections, which shall show the situation and dimensions of each property therein and who are the owners thereof, with a succession of blank columns in which the names of future owners are to be entered, with the dates of transfers. These books should be kept in the sub-department of the Surveyor-in-Chief so as to show at all times who are the owners of the properties, and should be kept so as not to destroy the evidence of ownership at any previous time, but by addition which will show the subdivisions of property and the owners as transmissions of title may take place.

To enable the Surveyor-in-Chief of the city to keep up the said books, it should be the duty of every buyer or receiver to title of ground to make a report to him of every conveyance made. with the precise location and dimensions of the premises. The same should be received without charge and noted on the deed of conveyance. If the

buyer should omit the said duty, the Recorder of Deeds should not admit the deed of conveyance to record in his office without charging a nominal fee for each lot described, and then it shall be his duty to furnish the above information to the Surveyor-in-Chief.

The above recommendation is made only as a general plan for the establishment of a sub-department for official surveys, the advantages of organizing and maintaining such a system may readily be seen, some of which are as follows:

The cost of keeping the city map up to date will be reduced to the very smallest amount possible. The fixing of street and property lines, so as to minimize the number of disputes over such lines in the future. The aid to the Appeal Tax Court in their assessing and charging taxes on property to its proper owner. The advantage to conveyancers in following the chain of a title. The charging up assessments on property for improvements to the proper persons.

It will be remembered that the Appeal Tax Court, in its Annual Report for 1902, under the head of "Compulsion Registration of Transfers," said: "The need has long been felt for some system of compulsory registration of property transfers in our office. Only by this means can our assessment rolls reflect the real ownership of property. It would be an effective check against the escape of property through previous exemption. It would also be a valuable aid in the collecton of taxes, and the city would get taxes in many cases where it now acquires title to undesirable property, assessed to non-owners, or to 'unknown,' and sold at a tax sale. This registration could be accomplished through a provision that deeds filed in the Record Office should not be considered as legally recorded until they had been transmitted and the transfer entered upon the books of this office."

The system as used in the City of Philadelphia is well near a self-sustaining one, the income being received from charges made for fixing and regulating street and property lines.

RECEIPTS AND EXPENDITURES.

I beg herewith to submit the following statement of the receipts and expenditures of this Department, for the fiscal year ending December 31, 1903:

RECEIPTS.

(Appropriation for 1903.)

For salaries	$6,090 00	
For expenses	180 00	
For sale of maps, etc	101 25	
		$6,371 25

DISBURSEMENTS.

For salaries	$5,790 00	
For expenses	71 51	
		$5,861 51

BALANCE.

Unexpended salaries	$300 00	
Unexpended expenses	108 49	
Receipts from sale of maps, etc	101 25	
		$ 509 74

It is with much sorrow that I announce the death of Mr. Henry Laessig, a draftsman in this Department, which took place near the end of the year. In Mr. Laessig, the Department had an earnest worker, ever ready to respond to the demands made upon him, and a rare personality which endeared him to those with whom he associated.

REPORT FOR THE YEAR 1904.

I beg to state that the work of the Topographical Survey during the past year has been greatly deviated from its street plan system on account of the many surveys that were necessary to be made in the Burnt District.

From the beginning of the year to the 22d of April, the Survey had been busily engaged in doing much work on the proposed Park System, and with the final acceptance of the Wy-

man Park Section, a number of plats were made and the property lines in connection therewith were established. Said plats consisted of a general map showing property in the vicinity of Wyman Park, and smaller condemnation plats showing property along Cedar avenue, the Wight estate, the D. Gordon estate, the D. H. Carroll estate, and those belonging to the United Railways, which are to be acquired for the park purposes. During September, in connection with the Wyman Park improvements, surveys were made and plats and descriptions drawn for the St. Paul street and Merryman lane boulevard, showing the widening necessary and the properties to be acquired. This was especially difficult on account of the very old records and the great inaccuracies of the old surveys, but condemnation descriptions were finally written based on the Co-ordinate System in use by this Survey, with the true meridian as a basis. These surveys, plats and descriptions required a great deal of time, and owing to the limited appropriation of the Department, it was found very difficult to fulfill the the many duties asked of the Survey by the Burnt District Commission, the City Engineer and other Departments, making improvements in the fire area. It was, therefore, suggested to the Park Board that they assist us in this matter. Though rather cramped for suitable office room, a portion of the Survey's quarters was set aside for the use of the Park Department, and Mr. P. C. Kennedy, formerly in the service of the Topographical Survey and the Sewerage Commission, was appointed by the Park Board to take charge of the increasing work in connection with the parks. All of the plats, records and information concerning the parks were then turned over to Mr. Kennedy, and all the work done by him has been in accordance with the standards for such work in use by this Department.

The Survey has worked in close conjunction with the City Engineer in regard to the establishment of street lines, and during the past year has established many such lines in dispute

or doubt, viz.: Mine Bank lane, from Biddle street to Federal street; Madeira street, from Fairmount avenue to Fayette street; Jones street at Fort avenue; Pulaski street at Franklin street; Madison street in Homestead; and a property survey on a scale of 40 feet to an inch was made for Point lane, or Lamont avenue, from Ensor street to Oliver street.

At the request of the City Librarian, the work of copying all city maps in his office that were made between the years 1729 and 1850, was carried out under the superintendence of this office, and Mr. R. H. Williams was employed for this purpose. The old copies of these maps had become very much worn and indistinct from much usage, so it was considered best to make tracings of uniform size of these maps, and from these tracings blue prints are now being made, which will be arranged in order and bound in Atlas form. These old maps are of invaluable service in finding the true lines of old streets, so that the above method of caring for them was thought to be best and most convenient for reference.

Owing to the amount of time required for looking up old records in connection with the establishment of true street lines, some systematic search was deemed advisable. Copies of all available old "Establishments" are being made, and these are filed with copies or references of all old maps that can be found, together with such obtainable information pertaining thereto; and Mr. L. B. Mather, who has much experience in this line, has been assigned to this work.

BURNT DISTRICT.

Realizing the great necessity that would arise for accurate maps of the Burnt District, the Survey at once began active field work in the area destroyed by fire. The true outline of the fire was first established, and from existing maps and records on hand a map to a scale of 100 feet to an inch was made, showing all the area destroyed. On this map was shown all widths between the old building lines and between curbs, and all buildings standing after the conflagration, with such information as could be quickly gotten together. Many copies of these maps were made and sent to the Citizens' Emergency Committee, as a basis for the preliminary work regarding the street improvements. After the Committee had considered and recommended the proposed changes to the Burnt District Commission, the Department was directed by His Honor, the Mayor, to make special preliminary surveys of those streets which were under consideration. This was begun on March 11, the day the Burnt District Commission was appointed. In order to facilitate the work the Survey requested extra help from the City Engineer, which was cheerfully given; and with the consent of the Commission, the surveying firm of S. J. Martenet & Co. was called on for assistance and to furnish certain information in regard to the building lines. This work was pursued with all possible speed, the force working on Sunday and late at night, until the plats were finally completed on March 17. Another map of the Burnt District was then made, showing the Burnt District as defined by Act of Assembly. While these plats were being considered by the Burnt District Commission changes were constantly being suggested, and new plats pertaining thereto were made. When the final plan of improvements had been decided upon, in conjunction with the City Law Department, the plats and descriptions were prepared to accompany the ordinances. Immediately after the approval of these ordinances the new street lines were established on the ground by suitable points, and these were shown to all the local surveyors, builders and other interested parties.

Owing to the great confusion and many disputes that arose from the relocation of the old building lines, as they existed before the fire, at the request of the City Engineer, the matter was taken in hand and all obtainable information bearing on the subject was collected.

The building lines were then established for all new buildings and special care was taken to guard against encroachments. A special instance of the confusion, arising from the relocation of these old lines, occurred along Holliday street, between Baltimore and Fayette streets, and much time was spent in making surveys and plats to arrive at the exact location.

These lines are being established physically by means of a half-inch copper bolt, six inches long, set in the granite or concrete curb, flush with the surface at each end of the block, and on a line parallel with and distant five feet from the building line. The true location of these points is determined by tieing them to the Survey's Traverse System, which gives their Co-ordinates with reference to the North and South, and the East and West lines passing through the Washington Monument. By aid of these Co-ordinates, the point, if ever destroyed, can readily be replaced with accuracy.

In connection with the establishment of street lines and their location, plats were made on a scale of 20 feet to one inch, each plat showing one complete block. These plats are being completed as the buildings are erected, the advantage in this being that the true outline of the building, showing the thickness of the walls or party walls, is easily obtained. The ground plan of all the buildings is shown, together with their dimensions; also all widths between building lines and curb lines, and the location of all physical objects, as lamp and trolley poles, water plugs and manholes, sewer inlets, etc. The character of the building, the number of stories, and the outline of the lot it occupies, was also shown.

These block plats are each indexed to conform with the square mile system used, and are numbered to correspond with the block numbers used by the Superior Court.

The city has never possessed a map of this description, and the need of it was clearly shown in planning and carrying out the improvements that have been made during the past year. When the above mentioned maps are completed they will not only satisfy the demand for an accurate property map, but will also be of valuable service in many other ways. The Appeal Tax Court has for a long time felt the need of a map of this kind in assessing property, and the said maps have been made partly with this in view. These maps should also prove to be valuable if the proposed Sewerage System is to be constructed, and, used in connection with the Survey's 200-foot topographical sheets, showing 5-foot contours, would save the municipality a great deal of time and expense in making surveys.

To assist the Building Inspector in assigning house numbers in the Burnt District, copies of the said plats are furnished him as soon as a sufficient number of buildings is erected in a block.

Much work in connection with the establishment of new and old curb lines has been done, and the lines of these curbs have been given to the City Engineer from time to time, as they were constructed and set. The Burnt District Commission made special effort to have the sidewalks of uniform width, and a number of surveys and maps were made for this purpose.

At the time the question of rearranging certain car lines in the business section of the city was under discussion, a plat was prepared for the City Engineer showing all lines as then existing, from which plats his recommendations as to changes were made.

In conjunction with the Burnt District Commission and the Harbor Board, surveys and plats were made in connection with the proposed Dock Improvements. At the first suggestion of changes along the water front, all available information regarding this section was collected, and a map prepared showing the old conditions as they existed before the fire. The new south line of Pratt street was established on the ground by suitable points and targets, and the widths and other dimensions of

the old docks and wharves were shown. These plats were used as a basis for the Harbor Engineer's plans for the new piers.

When the pier plans were decided upon, maps were made of the separate piers on a scale of 20 feet to an inch, showing their dimensions and the area in square feet. These maps were to be used by the Board of Estimates for the allotment of rental space. Smaller plats were then gotten up showing the new dock plan, and the relative positions of the new and the old docks. Several different maps of these improvements were made during the campaign for the New Dock Loan.

A small map of the whole Burnt District was prepared, showing all of the contemplated improvements, and from this, lithograph prints were made to a scale of 300 feet to an inch, and sold to the public for ten cents a piece, the cost of publishing them. A map of Light street, from Pratt to Lee streets, was prepared, with descriptions, to accompany the ordinance for the proposed widening.

RECOMMENDATIONS.

As mentioned in the beginning of this report, the work on the Annex street plan was greatly interfered with during the past year, owing to the amount of time required of the Survey in the Burnt District. The importance of carrying out and completing this work cannot be too strongly urged. At the present time, more than half of the street plan for the Annex has already been completed, and the street lines and the exact location of the corners have been established and plotted on square mile sheets, similar to the 200-foot topographical maps of the entire city.

In some sections of the Annex, much of this plan will require revision, owing to the extension of the Park System. A particular example of this is found in the vicinity of the Stony Run valley, the original plan here being void on account of the parking and boulevards now under construction, and an

entire new set of street connections is necessary. Owing to the above, it is desired to call again the Commission's attention to the section around Gwynn's Falls. In the report of this Department for the year ending December 31, 1902, it was urged that the city consider the plan proposed in that report for parking the valley of the Falls. The street plan has already been projected westerly as far as the topography of the country will allow practical grades, but before it is possible to prepare a street plan for the section bordering on Gwynn's Falls, it will be necessary for the city to determine whether or not it is its purpose to use said valley as a park. Owing to the above facts, the importance of finally determining the extent and location of the proposed Park System can be readily seen.

The general system of grades for the Annex Plan of Streets has not been decided upon, nor can an intelligent study of the conditions be made until the street lines are finally determined over a sufficient area.

In the event that a Sewerage System should be constructed, it would be very important that the lines and grades of the street plan should be determined upon, so that the sewers may be laid in conformity with the street plan of the sections partly or wholly undeveloped.

As the result of a recommendation made in the Survey's report for the year 1903, in regard to the collecting and filling of certain plats, the City Law Department, by request, has prepared the following ordinance, which, upon the approval of your Commission, will be submitted to the Mayor and City Council:

An ordinance requiring the filing of plats with the Chief Engineer of the Topographical Survey Commission and with the Inspector of Buildings before any permit for the erection of buildings in Baltimore City shall be granted.

Section 1. Be it ordained by the Mayor and City Council of Baltimore, That hereafter no permit shall be granted for the erection of any building or buildings within the limits of Baltimore City unless

the person or persons, firm or corporation desiring such permit, shall first file in the office of the Chief Engineer of the Topographical Survey Commission a plat, in duplicate, of the lot or lots upon which said building or buildings are to be erected; said plat to be made from actual surveys and signed by a competent surveyor.

SEC. 2. And be it further ordained, That the said plat shall show plainly by angles and distances the outlines of the said lot or lots and the relative position of said outlines to at least one corner of the block in which said lot or lots are situated, and to the building or buildings now standing on said lot or lots or to be erected thereon, and shall also show the relative position of at least two points in said outlines to some well established physical object then existing, whether the same be on said lot or lots or elsewhere, and not to be disturbed in the construction of the said new building or buildings

SEC. 3. And be it further ordained, That the date of filing of such plats with the Chief Engineer of the Topographical Survey Commission shall be endorsed thereon by the Chief Engineer. One of said plats shall be retained in the office of the said Topographical Survey Commission, and the other endorsed as aforesaid shall be returned to the applicant and filed by him with the Inspector of Buildings, and thereafter the proceedings and requirements for the application of said permits and for the granting thereof shall be in all respects the same as now provided by law

Recently, the question for the control of the private streets in the Annex has occupied the attention of a number of the City Departments. And since this Department is especially interested in the establishment of all streets in the Annex, the following suggestions are submitted:

It appears that property may be developed and streets opened according to the owner's plan; provided, however, in so doing the owner does not interfere with the rights of others. Apparently the only way the city may control such matters, other than by expensive condemnations, is to offer certain inducements, or to refuse certain privileges, to parties desiring to develop their property. In the Survey's annual report for the year ending December 31, 1902, a plan pertaining to the opening and developing of property was suggested. This plan was based upon the regulations now in force by the District Com-

missioners in Washington, and would seem applicable in the case of Baltimore as well. In the matter of offering inducements to property owners, the following suggestions are offered for consideration:

That the city stand ready to accept by deed or dedication the beds of all streets, improved or unimproved, that conform to the lines and grades of its official plan of streets for the Annex. And in consideration of the said deed or dedication, to relieve from that time on, the previous owner, of all taxes upon said beds of streets; and if unimproved, to allow said owner the full use of the same until such time as the city is ready to open and construct said street. Provided, however, in allowing the owner full use of the street bed, the city will award no damages for any improvements the owner may erect, nor assume any cost of removing the same when ready to open for a street.

In the matter of refusing certain privileges to the owners of private streets, it might be well for the city to consider a plan similar to one in force in Boston, which prohibits any municipal department from constructing or placing any improvements, such as water mains, sewers, subways, street lamps, and so forth, in the beds of such private streets. By the enforcement of conditions similar to the above, it would seem to be to the best interest of the owner to turn over the beds of these streets to the city.

An amendment to Chapter 453, Act of 1902, proposed in the report of this Department for the year 1903, was passed by the General Assembly and approved on April 8, 1904.

RECEIPTS AND EXPENDITURES.

I beg herewith to submit the following statement of the receipts and expenditures of this Department for the fiscal year ending December 31, 1904:

RECEIPTS.

(Appropriation for 1904.)

For salaries	$6,343 75	
For expenses	180 00	
For sale of maps, etc	164 15	
		$6,687 90

DISBURSEMENTS.

For salaries	$6,313 73	
For expenses	173 89	
		$6,487 62

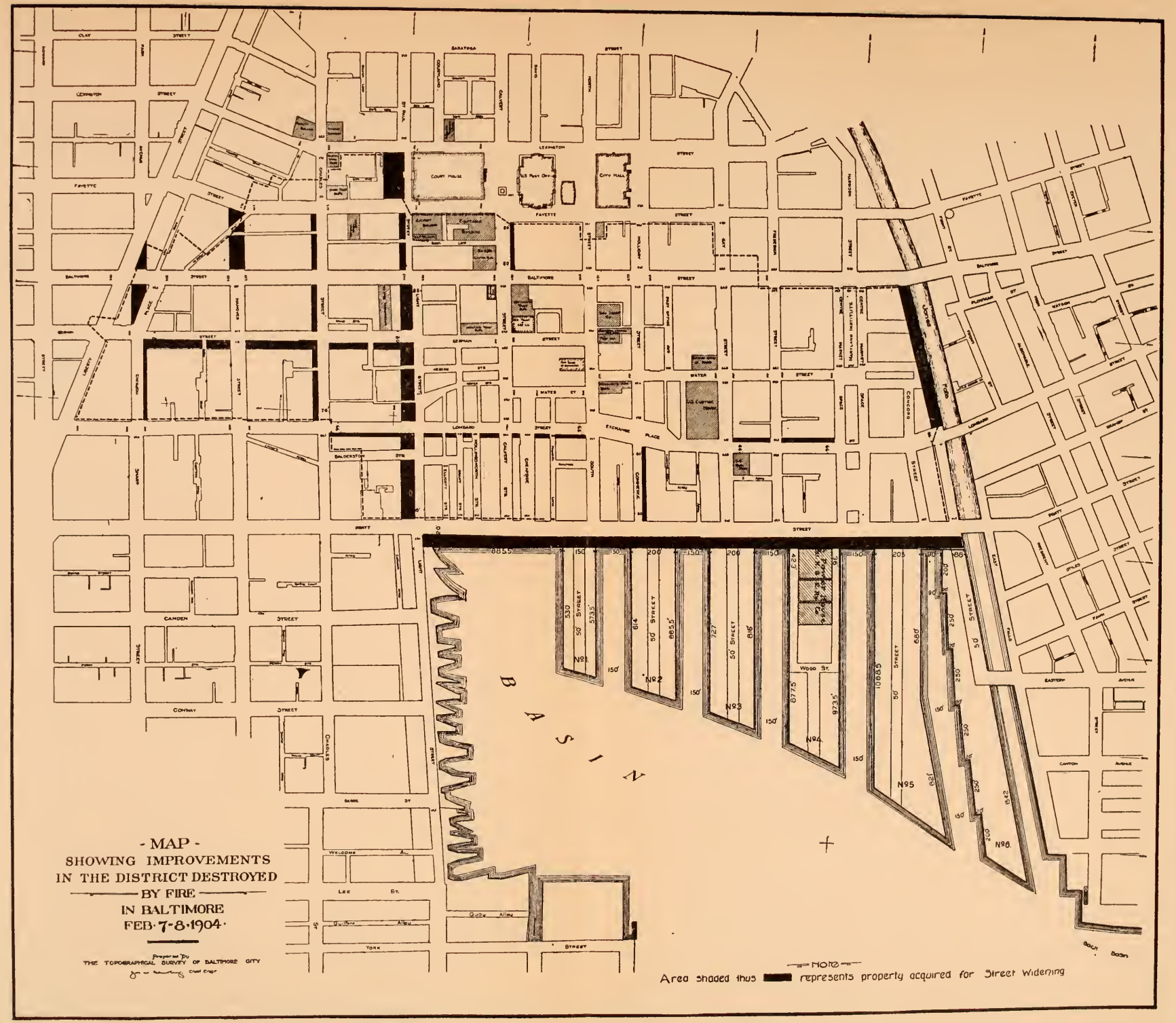
BALANCE.

Unexpended salaries	$ 30 02	
Unexpended expenses	6 11	
Receipts from sale of maps, etc	164 15	
		$ 200 28

The conscientious application and the care shown by my associates in the work of the Department demands especial mention, and I desire to here express my appreciation of the same.

Respectfully submitted,

JOS. W. SHIRLEY,
Chief Engineer.


- MAP -
SHOWING IMPROVEMENTS
IN THE DISTRICT DESTROYED
BY FIRE
IN BALTIMORE
FEB. 7-8-1904.
Prepared by
THE TOPOGRAPHICAL SURVEY OF BALTIMORE CITY
Chief Engr
BASIN
NOTE
Area shaded thus ■ represents property acquired for Street Widening

UNIV. OF MD COLLEGE PARK

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NOV 76

N. MANCHESTER, INDIANA